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Stuff

WHAT'S NEXT



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5 stars
for £200



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TOP 10 OF EVERYTHING

Looking to buy something but need a bit of advice? Turn to our *Stuff Top Tens*: our expert listings of all gadgetry, from p111

HOT BUY



Sony Cyber-shot HX60V
★★★★★
p124

#1 LONGEST LASTING PER CHARGE*



Duracell 2500mAh Rechargeable
awarded a Which? Best Buy



*AA size, based on first 400 cycles.

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* Calls cost 7p per minute plus your phone company's access charge.

WELCOME



At the beginning of the 19th century, the greatest boxer in England was a man from Bristol called Tom Cribb. Tom trained by delivering coal all day and then, when he finished work, he'd go to the nearest wood and punch the bark off a tree. Probably not all of it – he'd have had a devil of a time trying to punch the bark off all the little twigs – but still, he could beat up a tree. Not a lot of people – in fact, not any people – can say that. If you can beat up a tree, you can beat up anyone.

But do you *need* to beat up a tree? I would argue that you don't. In fact, if there's one piece of advice you should take from this magazine, it's that you shouldn't attack a tree with your bare hands. Because while Tom Cribb was whaling on the nearest oak with his massive fists, everyone else would spend five minutes working out with an axe and go home with an evening's firewood. Thanks to technology, exercise doesn't need to be mad and painful. With the right kit and a smart approach, it can be really fun: gyms can be cool, bike rides can be amazing, and you can even get fit playing video games. And with every calorie you burn having a laugh, you'll be surprised by how easy it was.

So that's what you'll get from this issue: tech that will turn your next workout from a gruelling ordeal into something you actually want to do. Ironical that it's printed on dead trees, really.

Will Dunn, Editor / willd@stuff.tv / @willydunn



THIS MONTH IN STUFF'S DIGITAL EDITION

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- Extra high-res pictures and videos

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 **head &
shoulders**

UNBEATABLE

(dandruff protection***)



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100% flake free* great hair, it's all anyone will notice

*Visible flakes seen at 2ft with regular use. **Based on Nielsen Shampoo value shares, from July 2014 to June 2015.
***With regular use vs. non-selenium containing anti-dandruff shampoos, against visible flakes seen at 2ft.



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I WATCHED THE FUTURE...

...and it's not as bright as I thought it was going to be. Not because the film was

The Hunger Games: Mockingjay, Part 2 (which is at times pretty morose), but because I was watching it in Dolby Vision, which I was expecting to be similar to the high-frame-rate release of *The Hobbit* a few years ago: all overblown and uncinematic. But Dolby Vision's High Dynamic Range (HDR) and colour tweaks actually worked really well. Rich and balanced, it was, and atmospheric; a perfect foil for a frowny Jennifer Lawrence.

Fraser Macdonald, Consulting Editor



I HAD A DAY OF PURE GEEKERY

...at the Stuff Innovators pop-up event in Shoreditch, which gave tech fans

a closer look at future classics like the iPad Pro and BMW i8. I made an unstable 3Doodler sculpture that looked more mutant than man, and marvelled at the HP Sprout's 3D scanning abilities. A quick spot of vertigo at the edge of the Samsung Gear VR's virtual cliff face was followed by beating Kyle Pittman at *Anki Overdrive*, and I finished the day off mastering my *Guitar Hero Live* skills. Tough day at the office.

Esat Dedezade, Staff Writer



OUR MONTH

What this issue has brought us by way of geekery



I CLIMBED EVEREST IN VIRTUAL REALITY

I don't know about you, but my body isn't made for mountaineering. I can barely handle my morning commute. So when I was asked to climb 8848 metres above sea level to the summit of Everest, I politely declined. Then someone said I could do the whole thing in 20 minutes on the HTC Vive and I quickly changed my mind. All I had to do was head into London, strap on some goggles and wave my hands around like a buffoon. Nice view up there, by the way.

Rob Leedham, Reviews Editor



I PUT A GUITAR THROUGH AUTOTUNE

Hooray for autotune, the digital audio technology that makes bad singers sound like bad but technically accurate singers. The Antares ATG-1 can do the same for your guitar – not to mention adding a host of other effects, from alternative tunings to emulations of different pickup types. The only snag is, you'll need to fit a suitable digital pickup to your guitar. That faint screeching sound you can hear is my Telecaster saying "Get this bloody thing off me!"

Richard Purvis, Production Editor



H O T S T



HOT
FOUR
#1

THE FUTURE OF FORMULA 1

McLaren MP4-X

Despite (or perhaps because of) its struggling performance in 2015's Formula 1 series, McLaren has put a serious amount of future-gazing into this incredible concept. Lots of its features are already banned by the F1 authorities, and others quickly would be, but all would, naturally, also be awesome advancements for roadgoing vehicles. For starters, body panels that can change shape. For aerodynamics, sure, but also to enable them to reform after an impact in case there's a secondary collision. Plasma flow technology electrifies the surface of panels to reduce drag — great for speed, but also economy... if the power needed to do it could be efficiently captured by solar panels. The driver, meanwhile, gets in-helmet augmented reality displays that effectively make the car invisible from the inside, as well as overlaid data on the surrounding cars in the race. McLaren finally gets carried away with talk of binning physical controls in favour of direct brain control, but nonetheless the MP4-X is a wonderful geek's dream.

As hot as... your Honda Civic, in 2025
£tba (concept) / mclaren.com

WATCH YOUR HEAD

A roof to protect the driver splits opinions in F1, but this is a high-tech solution. It tints in bright light, repels water and features a head-up display, both for the driver and for TV viewer cameras.



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F

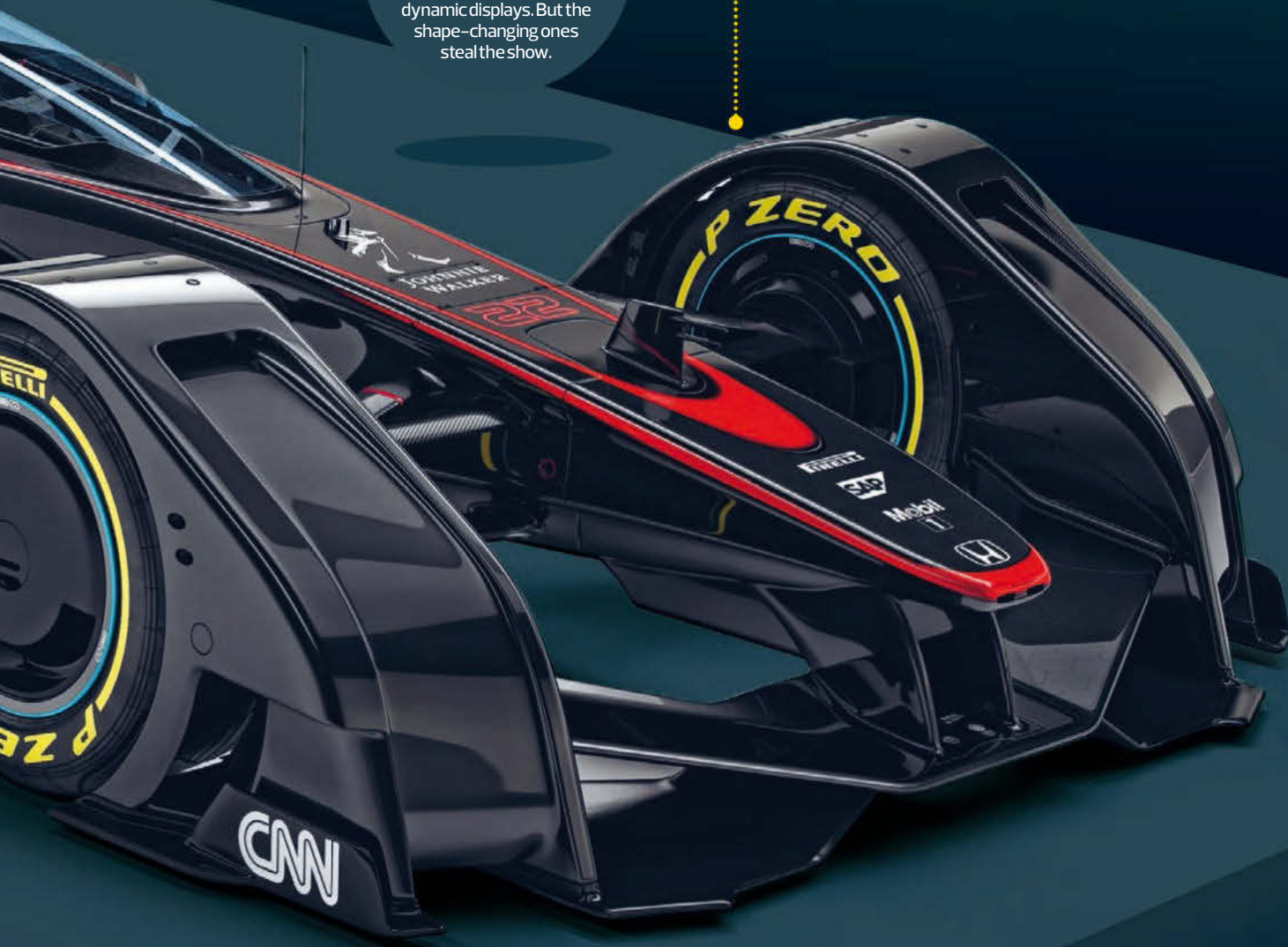
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24 PAGES
OF THE BIGGEST
STORIES FROM
PLANET TECH



PANEL SHOW

The MP4-X's body panels are multi-talented. Some have plasma flow technology to decrease drag, some are solar panels and some feature dynamic displays. But the shape-changing ones steal the show.



HOT
FOUR
#2THE PC THAT
COSTS £4

Raspberry Pi Zero

Even now, you might have enough loose change in your pocket to buy this computer.

A computer! Something that used to fill an entire room, now in your pocket for the price of a box of Lindt Lindors. Although, unless you habitually carry around a lot of loose change, you might have to reach for your wallet to get the Linux-loaded SD card, USB power supply, microHDMI adaptor and HDMI cable needed to actually fire up this new mini Pi. (You might have some of that, but probably not in your pocket right now.) The size-zero Zero weighs just 9g, and measures 65x30mm. It is assembled in Wales with the same Broadcom processor as the original Pi, but now clocked to a healthy 1GHz and with 512MB RAM. It is just 5mm thick and has a flat bottom, which is smashing for building it into projects... though you might need to solder GPIO pins onto it if you're planning something proper geeky.

As hot as... **Wales's silicon valleys**

[£4 / raspberrypi.org](http://£4/raspberrypi.org)

PI'S THE
DADDY

By the time you read this, Pi's unrivalled global community will have spawned countless Zero-based projects. But also check out other boards from Arduino, BeagleBone and Imagination's MIPS Creator.

TINY TOT

The Zero is designed for sneaking into the smallest of projects. But that also means you lose the normal Pi's video and Ethernet sockets, while HDMI and USB are micro size. Could be that a full-size Pi 2, for £30, would suit you better.

HOT
FOUR
#3

RUNS LIKE BOLT, TRACKS LIKE MEARS

Withings Go

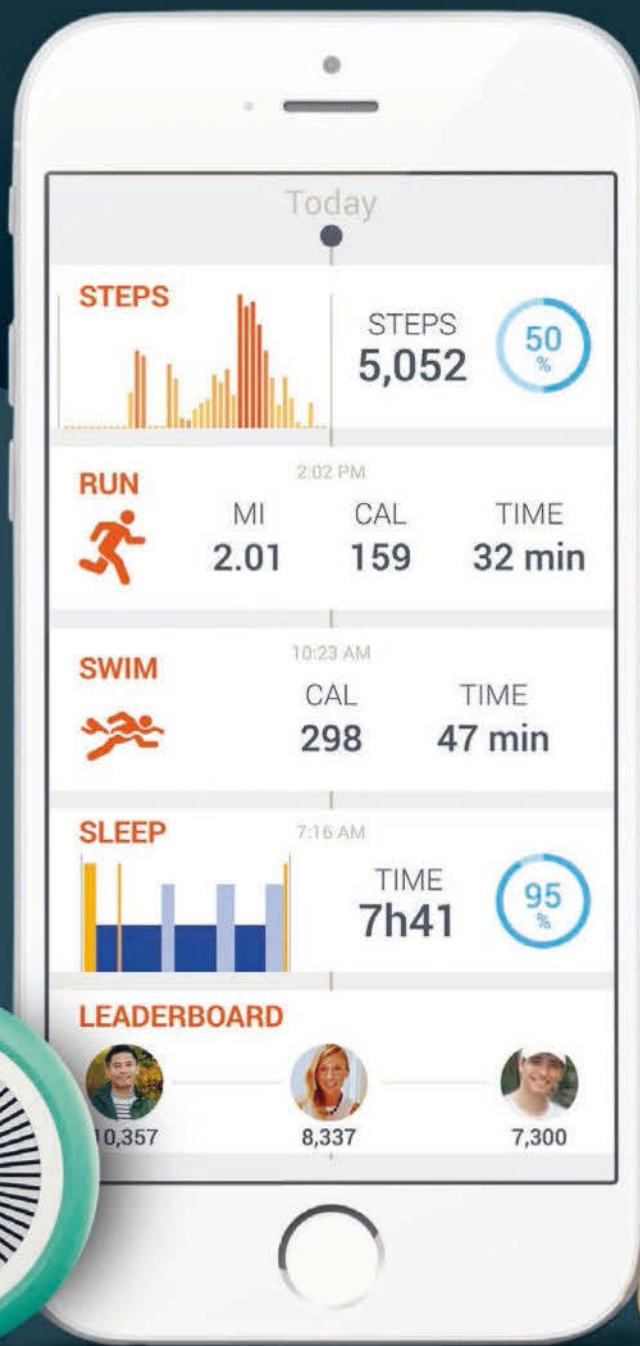
Eight months. There are many things you might do in that time. Many steps you might take, irreversible decisions you might make. But what you won't do is spend a single moment fustering about for the Withings Go's charger, or being cross at yourself for not charging it. Because its single CR2032 button battery is sufficient to power it for those eight months, despite its always-on E Ink screen that shows percentage goal completion, targets achieved or an analogue clock face. It can be wrist-worn or clipped and tracks walking, running and sleep, syncing data with the Withings Health Mate app (iOS or Android). It's also waterproof, sensing when you've hit the pool and tracking time and calories. If the UK price ends up being about £50, this could be the fuss-free and frugal fitness device of 2016.

As hot as... one less charger by your bed
US\$70 / withings.com



GET IN THE SEA!

The Withings Go is water-rated to 5 ATM, which basically means swimming. It'll register that you've entered water, logging time and calories, but it doesn't have the stroke metrics of a triathlon tracker.



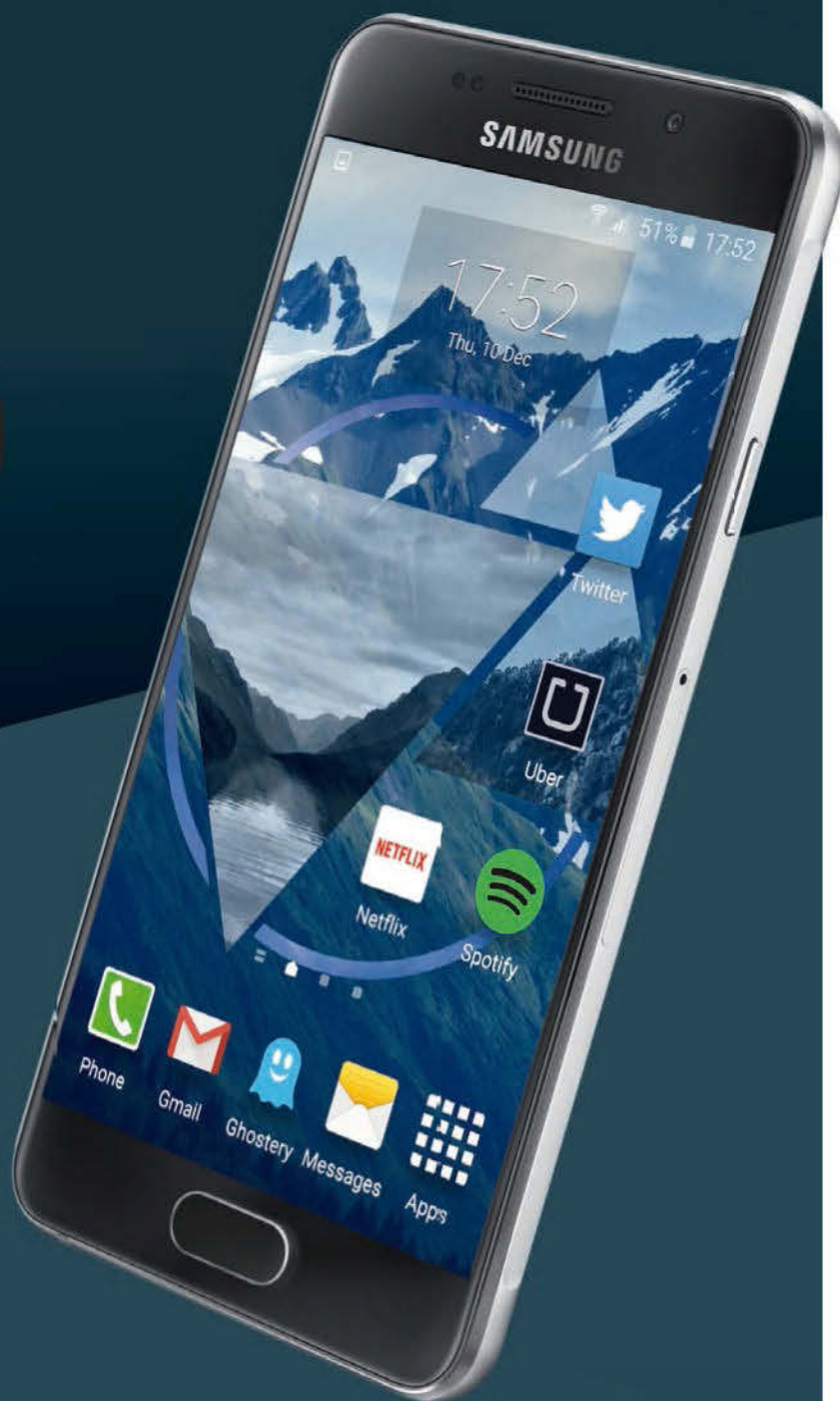
EYE FOR A BARGAIN

All three Samsung Galaxy A models get a 13MP rear camera and a 5MP front camera, with an f1.9 aperture for (presumably) decent low light ability. The A5 and A7 also get optical image stabilisation.

HOT FOUR
#4A IS FOR ASPIRATION
Samsung Galaxy A

People who have to walk talk fondly about bicycles. On wet days, cyclists talk about cars. Drivers talk about dry days in sports cars, and sports car owners discuss yachts. Sailors, meanwhile, read up on private pilot theory when the sea's a-rolling. The point being, we all might scour the interwebs for leaked details of the latest Galaxy Edge superphones, but when it comes to standing in a high-street mobile emporium on a dank Sunday morning, thinking about monthly costs and budgets, a mid-range Samsung Galaxy A is what we buy. And why not? The new A3, A5 and A7 come with 4.5in, 5.2in and 5.5in screens and bigger batteries. The larger two of the group get the lion's share of goodies, with 1080p resolution, octa-core processors, optical image stabilisation for their 13MP cameras and – a first for a non-flagship phones – fingerprint readers for using Samsung Pay. Rather aspirational, really.

Ashot as... the words 'free on contract'
[ftba / samsung.com/uk](http://ftba/samsung.com/uk)



XTREME

PORTABLE BLUETOOTH SPEAKER

ICE ICE BABY.



JBL XTREME
NOVEMBER 2015



CLIP+



FLIP3



CHARGE2+



PULSE 2



Bluetooth®



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JOIN THE Q FOR SKY'S IDEA OF TELLY HEAVEN

Sky Q

£149 / sky.com



Lost the remote? Press the Q button on the box and the missing zapper will sound an SOS call so you can retrieve it.

It's a telly Tardis

It's about time Sky gave its box of tricks a proper overhaul and, by 'eck, that's what we've got. Where to start? Well, the box you plug your dish into (called Sky Q Silver) has a 2TB hard drive (space for 350 hours of *University Challenge*) and 12 tuners. Yep, 12. It doesn't even need them all right now but Sky says the extra ones are there for futureproofing. Despite having all this crammed inside, it's actually half the size of the current Sky+ box. The hefty old Sky remote has been replaced, too, by a swish new Bluetooth zapper with a touch panel in the middle.

It has its own Mini-Me

The Q Silver is joined by a little brother, the Sky Q Mini, which

makes its home in other rooms and streams from the main box, whether it's live or something sitting on the Silver's hard drive. You can have up to two Minis and two tablets streaming TV around your pad, all while recording four channels on the main box and watching another. You'll just need Marty McFly's DeLorean to find time to watch it all.

It'll go out and about

Need to head out before you've finished an episode of *Luther*? The Sky Q app will let you sync recordings from your box to a tablet so you can take them with you. It also works from one telly to another, so you can be watching on one box and move to another without missing a single frame. If

you've got Sky broadband there's also a new router, which has 5GHz Wi-Fi and Powerline tech built in. Using the latter it can turn any Sky Q Miniboxes in your setup into Wi-Fi hotspots, sending clouds of fresh internet billowing into the air around your home.

And it'll do 4K (soon)

BT beat Sky to the punch when it came to 4K Ultra HD, but Sky Q does have the necessary skills to deal with it – they're just not quite ready yet. Sky's 4K channel will launch "later in 2016" but the biggest question that remains is price. Sky's already pricey, so how is all this extra stuff going to affect our wallets? As soon as we find out, we'll let you know right here.

YOU CAN MOVE AND SWITCH TV BOXES WITHOUT MISSING A SINGLE FRAME



BUT THAT'S NOT ALL!

● App's entertainment

Each new Sky box can also run a few apps. There's one for YouTube, one for Vevo, a Facebook one and a Photos app for making slideshows that can be displayed on your big screen.

● Sidebar of sheen

Some apps run in a sidebar so they don't interrupt what you're watching – that way you can keep up to speed with the football scores using the Sky Sports News HQ app, or check the headlines with Sky News.

● Music maestro

It's not just television that the new boxes are into. You can also use AirPlay or its Bluetooth connection to stream music from Spotify, Apple Music, TuneIn Radio or your own locally stored songs.



This guy's a player ASTELL & KERN AK320

For a company that revels in high-res audio, A&K's engineers spend an impressive amount of time grafting, and not lounging around listening to Pink Floyd albums and smoking cheroots. Here's yet another product, a 'more affordable' alternative to the £3000 AK380. The difference

is oomph: this AK320 can handle up to 24-bit/192kHz PCM files. Anything more grand than that, or DSD files, will be downsampled. It also has less onboard storage than the AK380 at 128GB, but highlights such as the dual DAC setup, USB DAC ability and super-solid aluminium build are present and awesome.

£1500 / astellkern.com



Pretty gait machine TIMEX METROPOLITAN+

We don't all have the jib cut for neon drama and £10,000 Apple Watches. This Timex plays to a subtler audience, in a similar way to the analogue-faced Withings Activité. But in addition to the Activité-style 'percentage of daily goal' display, the Metropolitan+ also has a fourth big hand that shows steps (in thousand units) or distance in miles (or kilometres, as configured on the iOS or Android app). It stores up to seven days of this data, at which point you have to manually sync the watch with the app over Bluetooth. Using this irregular connection method, Timex says the watch's battery will last over a year and a half.

£130 / timex.co.uk

START MENU

The latest startups, crowdfunded projects and plain crazy ideas

KICK-STARTER

Is that a guitar in your pocket? **KURV GUITAR**

The reasons for not carrying an actual guitar around are manifold. Fragility. Cumbersomeness. The tendency for otherwise reserved people to demand you smash out a Billy Idol mastermix. The Kurv lets you carry your string skills more discreetly. In your left hand is the main Kurv unit with eight pressure-sensitive buttons. In your right is the motion and gesture-sensing Pick (a left-handed setup is also available). The two combine with an iOS app, upon which are preloaded 60 well-known songs to play along to, and some basic guitar theory. But the pair's output can also be used as a MIDI input for more serious software.

£150 / kurvguitar.com



BACK IT

STACK IT

SACK IT

KICK-STARTER

KICK-STARTER

KICK-STARTER

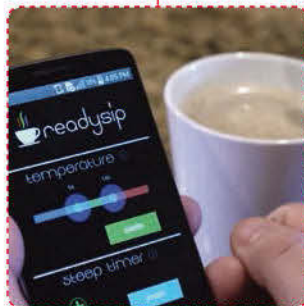
INDIE-GOGO



Paper fighters **POWERUP FPV**

"The first ever paper airplane drone with a live streaming camera" sounds like an exercise in trophy-bagging semantics. But it also sounds like a whole load of dangerous fun, with the pilot's navigation hampered by the cardboard VR headset. Buy several with your mates, take them to a quiet area of the park and dogfight.

US\$180 / poweruptoys.com



Hot in the sippy **READYSIP**

This is either going to make you squeal with delight at the joys of human invention, or howl in dismay at a display of wanton consumerism. Either way, it is a Bluetooth temperature probe for your hot drink, with LEDs predestined by the app to glow from red to green when your beverage is safe to sip. Ah, you went with howl. Us too.

US\$30 / readysip.com



Egged on (and off) **SMARTEGG**

This plucky little egg is capable of a great many functions, based around the premise of an app-based universal remote control. It has Unity database-powered infrared codes for over 5500 remote controls, with customisation, learning and macros. Functions can be triggered by your proximity, or by time.

US\$40 / aico.tech



Pi-powered light show **AMBISCREEN**

On the face of it – or rather, back of it – this is a way of retro-fitting Philips Ambilight-like LEDs to your TV so it glows to match the on-screen colours. But dig deeper and you discover that the control box is powered by a Raspberry Pi, so added Internet of Things geekery is available to motivated geek tweekers.

US\$200 / ambiscreen.tv



The best soundbar?

The experts think so...



Home Cinema Choice 'Best Buy',
July 2014



Trusted Reviews 'Recommended',
October 2014



What Hi-Fi? Awards 2015,
'Product of the Year'



AV Forums 'Highly Recommended',
July 2014



Tech Radar '1st in Tech Radars
Top 10 soundbars', March 2015



Media 4 The real hi-fi soundbar

Sonic wizardry for music and movies

With its 100w amplifier and built-in subwoofer, the Media 4 plays music, TV sound and movies with astonishing quality - no extra boxes required!

Simply plug and play - plus wirelessly connect smartphones, tablets and laptops using aptX Bluetooth.

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SEVENOAKS
SOUND & VISION

and all good audio retailers

www.Qacoustics.co.uk

EAR TUNES

Whether you're in-ear, on-ear or sporty wireless, there's a music delivery device here for you



FRUGAL FLAGSHIP



SoundMAGIC Vento P55

Best known for its excellent affordable earphones, SoundMAGIC has decided to stick its lugs into a grander market. A princely £150 is being demanded for the on-ear P55s, but if the company continues its past form, the aluminium and stainless steel construction and in-house 40mm drivers will deliver a performance to rival that of their much spendier rivals.

£150 / ksdistribution.co.uk

NEAT FREAK



Urbaneears Sumpan

A lot of thought has gone into these. Mostly, it seems, to encourage you not to use them. The earbuds are angled so that you can hook them together behind your neck when they're not in your ears.

The 3.5mm jack, meanwhile, forms a handy loop to hold the coiled cable when they're off your body altogether. There are ten colours to choose from, including Moss, Jam and Bonfire Orange.

£25 / urbaneears.com

SPORTY EAVESDROPPER



JVCHA-EBT5

Be careful what you say around an HA-EBT5 wearer – the earpieces are designed to let in a certain amount of ambient noise. This is so that joggers can hear approaching cars, but with the effect that they will also hear your unflattering comments about their running style. These sweatproof Bluetooth sportspPhones have a 2.5hr charging time for 4.5hrs of playback.

£60 / jvc.co.uk



Big noise

TEUFEL BOOMSTER XL

'Bang for your buck' is too unsubtle a phrase to describe Teufel, a German audio brand that specialises in direct selling. But this XL version of its Boomster Bluetooth portable speaker being twice the price of the original suggests a very large bang indeed. An 80W amplifier drives twin 7cm midrange speakers plus a whopping 16cm downfiring subwoofer, with its battery able to sustain the resulting cacophony for eight hours. It has an FM radio built in, in case eight hours is more Bluetooth party time than your phone can handle.

£500 / teufelaudio.co.uk



Just face it: you're regular

OAKLEY FLIGHT DECK XM

Do you know what they say about you when you're not listening? They say you have face. Before you decide whether to be annoyed, there's clarification: by 'face', they mean that you don't have a big face, or a tiny face. Oakley, the 'they' doing the saying, has produced this 'XM' version of its Flight Deck snow goggles, just for you and your medium face. It is available, as seen here, with the new Prizm lens tech that's optimised for colour, contrast and visibility.

£165 / oakley.co.uk



↓ DROP EVERYTHING AND DOWNLOAD...

Architecture Of Radio £2.29 / iOS

Despite its name, this is not an app that has diagrams of dissected radios. Instead, it grants you the most sought-after of superpowers: the ability to see radio waves. The app uses GPS along with a global database of the locations of nearly seven million mobile phone towers and 19 million routers, plus the hundreds of satellites in orbit. Hold up your iPad and it creates a whizzy visualisation of the waves in action around you. Not real, measured radio waves, then, but a fascinating visual study nonetheless.



? WTF IS DRIFT TV?

Is it 24/7 screeching sideways car action?

Braap! Nope. But it is, in fact, somewhat related. Imagine it's Sunday night, and you've stayed up until the wee hours watching the latest Formula Drift round from Long Beach, California. High-octane car ballet! Rock music! Engines! Lights! Whooping commentary! And then you remember you've got a quarterly review in the morning, and so you guiltily scuttle off to bed. Can you sleep?

No, ma'am. Because my body may be at rest, but my mind is still racing.

Exactly. More than that, says Drift TV maker Saffron: the blue light emitted by modern screens messes with our archaic brains, making them think it's still daytime. Circadian rhythms, melatonin, eyes like golf balls – there's Harvard-branded science to back this up. So what do you do to get to sleep?

Whisky and Nyto!

Oh, really? A fine, upstanding figure you'll present at that 9am appraisal. No, the solution to blue light overload is far simpler. Just stop watching TV, or using any screens, about three hours before a sensible bedtime. Have a bath. Read a book. Colour-code your sock drawer. Let the actual sun go down on your deserving self.

Ha! Good one. "Book".

Yeah, so the 21st century option is Drift TV (US\$100, seesaffron.com), which sits between your set-top box and your TV and, bowing to your preset timing demands, reduces the blue light levels of your TV picture as you approach bedtime. Slowly, so you probably won't even notice it happening. The brain – so complex, so easily fooled – reacts to this warming of the colours by dutifully running its own shutdown routine. Theoretically, whether you're watching screeching cars or screaming horror, you'll still sleep like a baby. (Without necking a pint of Calpol.)



App's well lazy

DE'LONGHI PRIMADONNA ELITE

Because even a £1500 coffee cooker won't walk over to your bed, this new De'Longhi bean machine has Bluetooth.

Fire up the Coffee Link app on your iOS or Android device and, after choosing your perfect combination of aroma, milk, coffee and temperature, you can set the process off without lifting a single decaffeinated limb. Your brews can be saved to one of six profiles, which can also be accessed on the Elite's colour LCD screen. But for that, and to drink your actual coffee, you will still have to walk over to it.

£1500 / delonghi.com



Crisscrossing your home with rope and cowbells is a low-tech, if time-consuming, alternative.

Xandem access memory

XANDEM

Xandem! Whisper it. But don't talk about it, because it could be the crafty burglar alarm of the future. It crisscrosses your space with invisible radio frequency beams, which can travel through walls and furniture. A hub analyses the nodes' signals and can show you the exact location of an unexpected visitor in the app. It can also trigger other cloud-connected systems, such as Philips Hue lights or Sonos speakers, so you could set it up to subject intruders to an impromptu disco so embarrassing they'll leave without nicking anything.

US\$495 / xandem.com



A laptop that erases borders, starting with the display.

It's the world's smallest 13-inch laptop, but that's only the beginning. With the Intel® Core™ processors, Windows 10, a virtually borderless InfinityEdge display with an UltraSharp™ Quad HD+ option, and amazing battery life, XPS 13 is designed to outperform the competition in every category.

Find out more about the new XPS 13 at Dell.co.uk/XPS13 or search for Dell XPS.



The new XPS 13.
Includes an Intel® Core™ processor

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BRIGHT LIGHTS, BIG CITY

No, it's not some Scandinavian bike path traffic light scheme. It's art. Specifically, it's the arrival in London of the hugely successful Lumiere festival of light, which has been held in Durham on and off since 2009. From 14–17 January, parts of London will be lit up by installations from various artists. This one, *Binary Waves* by the Belgian group LAb[au], represents the electromagnetic waves that carry the city's communications – see also *Architecture Of Radio* on p21. Other works will include giant humanoid figures in St James and a glowing aquarium inside a Mayfair telephone box.

NEWS FEED



GO VR SCUBA WITH ATTENBOROUGH

Global superhuman Sir David Attenborough has teamed up with the Natural History Museum to create a VR tour of the Great Barrier Reef. Visitors (over 13 years old) can pay £6.50 to don a Samsung Gear VR headset and spend some quality subsea time with Sir Dave.



SWATCH PAY ON ITS WAY?

Swatch launched its NFC payment watch in China in October. But now the Bellamy will be sold in the US, Brazil and Switzerland, paving the way for a wider European launch. It works with Visa credit cards and would be an inexpensive contactless option.



APPLE TO GIVE THE JACK THE SACK?

In order to make the iPhone 7 the slimmest yet, says the internet, Apple is going to ditch the headphone jack. If true, the Lightning port will be your one-for-all connection, bringing tasty benefits such as all-digital signal path and power for external amplifiers.

oppo



PM-3

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& home theatre innovation

Planar Magnetic Headphones | Universal Blu-ray Players | Headphone Amplifiers



BDP-103D
BDP-105D



PM-1

PM-2



HA-2

oppodigital.co.uk

3 OF THE BEST

APPLE TV GAMES

ALTO'S ADVENTURE £2.29

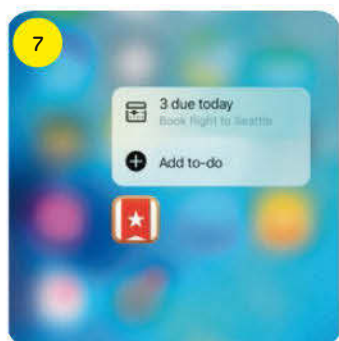
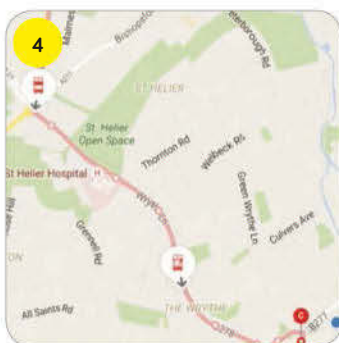
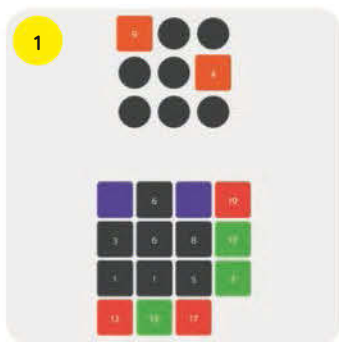
This is gorgeous on the big screen. As your little snowboard leaps over ravines, the weather and daylight subtly shift. Big scores require mastery of stunt combos and the ability to outrun angry elders.

BENEATH THE LIGHTHOUSE £2.99

Nitrome's arcade puzzler features a lighthouse with spiny rooms of spikes. You make circles on the touchpad to get a rotund chap from entrance to exit without being impaled.

CHILLAXIAN £1.49

This loving arcade tribute is more hypnotic than frenetic at first, as you swipe to blast away waves of dive-bombing aliens. But survive enough waves, and those aliens start learning new tricks.



1Griddition

£free / Android

Flexing your mental maths muscle – by playing this grid-based, against-the-clock game – can have positive effects in real life: be a shrewder car-boot bargainer, or a more precise pick'n'mix measurer.

4 Citymapper

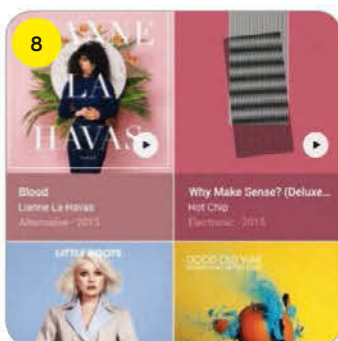
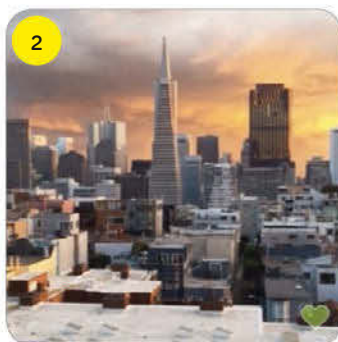
£free / Android, iOS

Apologies to our readers not in Manchester, Birmingham or that London, but more ace updates to Citymapper are worth mentioning: a new see-everything map mode, and live moving buses.

7 Wunderlist

£free / iOS

We're not going to list any old app that's had a 3D Touch update, just like we don't go mad for Apple Watch updates, but the ability to long-press for an instant reminder makes this app way more usable.



2 Periscope

£free / iOS, Android

Big update for Periscope, in case you'd gone cold on it. (We had, a bit.) Video replays from the last 24 hours now show on the map alongside live broadcasts, while iPhone users get handy 3D Touch shortcuts.

5 Pro Pinball: Timeshock

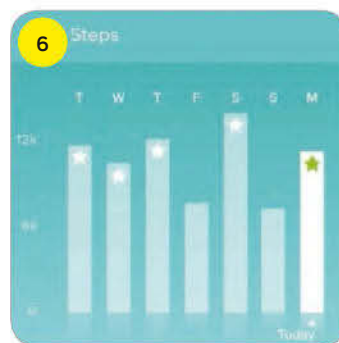
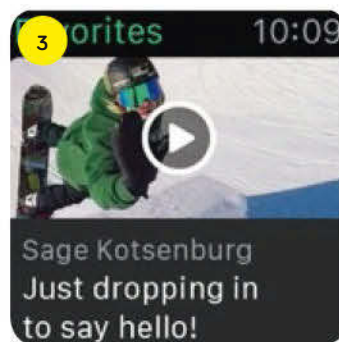
£2.49 / iOS, Android

It's been a finger-twitching wait, but the Android version of the Kickstarted reissue of *Pro Pinball* is here. The iOS version has had nowt but good reviews since early 2015, so this is a hot release.

8 Apple Music

£free / iOS, Android

In order to compete, Apple Music always had to be on Android, and here it is. It's a feature-rich transfer, with all of the same look and feel. Subscription still uses an Apple ID and costs £9.99 a month.



3 Vine

£free / iOS, Android, Windows Phone

We try not to mention any old Apple Watch app – and there haven't really been that many – but this one is surely worth a pop. You can now watch tiny Vine loops on a tiny screen on your tiny wrist.

6 Fitbit

£free / iOS, Android

The Fitbit app gets weekly workout goals to encourage constructive effort. Meanwhile, conveniently, the Surge and Charge watches now recognise and log specific exercises: cycling, Zumba, kickboxing, etc.

9 Horizon Chase

£2.29 / iOS, Android

A love letter to classic 1990s arcade racers, *HC* is an intoxicating old-school blast through 73 tracks set in 32 cities. It's hard and it's fast, but its toe-tappy soundtrack and gorgeous visuals keep things fun.

You've become your own big brother GARMIN VIVOSMART HR

Spare a thought for your heart. It's been going through its motions, with little attention from you, since your very earliest days. Now, with no change in its circumstances, you want to strap on Garmin's new optical heart-rate monitoring device and inspect every single beat on a 24-hour basis. You'd better hope your heart is not a union member, or you might be looking at strike action. Other things you can access via the touchscreen include daily steps activity, workout metrics, sleep monitoring and notifications from your phone; 50m water resistance and five-day battery life complete what looks like a decent, if actionably intrusive, package.

£120 / garmin.com/uk



Softly, softly, catchy... dammit THURAYA SATSLEEVE HOTSPOT

This is going to take patience. You're going to have to hang around in coffee shops and airline lounges until the precise moment you see one exec complaining about the Wi-Fi, just for another one to boast about their mobile Wi-Fi hotspot device, but then realise there's no signal. At this point, you strike! Out with the Thuraya SatSleeve Hotspot: "Yeah, I used to use terrestrial networks, but satellite internet's just so damn *global*, isn't it?" With a flourish you show them the iOS or Android app. With a rueful grin you discuss the US\$7/MB tariff... and then, with a shudder, you realise you're too far away from the window to get a satellite signal.

£400 / expansys.com



FUTURE STUFF MODULAR TRAVEL

Fraser Macdonald imagines arriving at the airport having already departed

Hong Kong's Airport Express check-in system lets you ditch your bags at a central train station up to a day before take-off.

Armed only with your boarding pass, you can go back to your city-centre touristy or businessy activity, only jumping on the train to the airport at the zenith of your building panic about security queues.

It's neat. But neater still would be if the train simply grew wings and took off, bypassing that undignified transfer from wheels to wings at the airport. Airbus has

filed a patent for a modular plane and airport system, where passengers are loaded into a semi-cylindrical coach section within the terminal, which is then lowered onto the plane as it heads towards the runway.

This is surely the brainchild of Airbus's Customer Satisfaction team, who want to maximise your safety and convenience, and nothing at all to do with piping more humans into profit-making planes in less time.

But combined with Hong Kong's method, we're looking at a future transport system

where premium travellers can be moved about the world in plush shipping containers. Perhaps they'll wave at bemused onlookers as they're transferred from Elon Musk's Hyperloop to sub-orbital Virgin Galactic spaceplanes, and from there to a galaxy sightseeing spaceship or back to surface transport. They will emerge – after a day or so of deliciously efficient security-checkless movement – straight into the lobby of the hotel, just in time for a shower and a change before dinner.

Pioneer



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FOR PCM 384 KHZ AND
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Experience Hi-Res music while on the move with the XDP-100R digital audio player. XDP-100R is the first portable player with access to the exciting new MQA music format for streaming and downloading music in pure studio quality. Pre-installed access to music streaming services such as Tidal, Deezer and Spotify are included along with access to the Onkyomusic store for direct Hi-Res downloads. The flexible Android operating system makes the XDP-100R the ideal partner for any music fan on the move and at home. With a 4.7" touchscreen, WiFi & Bluetooth connectivity, expandable storage capacity up to 432GB, every possible need is catered for. The sound-optimized architecture with high-precision Sabre D/A converter and headphone amplifier guarantee a music experience like no other.



* MQA requires free firmware-update

www.pioneer-audiovisual.co.uk



FIRST PLAY THE CLIMB Oculus Rift

There are experiences that seem made for VR, and we can now add climbing to that list. Crytek's *The Climb* takes a really simple concept – climb from point A to point B – and makes it thrilling, because it just feels 'right'.

In the case of the demo level I played, the starting point was a wooden platform already a fairly long way up a cliff face in a beautiful, idealised version of Ha Long Bay in Vietnam.

You scan the rock face for handholds, which are often marked with chalk and prompt a gripping animation from the

disembodied hands floating in front of you.

Press triggers on the controller and the corresponding hand will grip the ledge you're looking at. Then it's just a case of finding the next handhold to make progress. Simple.

But that doesn't mean it's not challenging. Just finding the next hold can involve a vertigo-inducing lean.

And then there's the jumping. At one point I had to leap across a ravine, and as I looked down I couldn't help but ponder what Morpheus said about death in

The Matrix. I pressed both triggers and... fell to my doom. Thankfully, I reappeared at the last checkpoint. Falling is like getting an injection: terrifying, but over in an instant.

After many such falls I did get the hang of it, though, and before too long I'd reached the summit, relieved, exhausted and a bit sweaty: the game can't recreate the physical exertion of climbing, but the adrenaline is all present and correct. And the climbing action should be made even better by the Oculus Rift's Touch controller.



COMING TO CONSOLES

DIRT RALLY

PS4, Xbox One

F1 might think it has the world's best drivers, but you only have to watch someone guide a car doing 100mph down a road designed for sheep and tractors to appreciate just how Jedi-skilled rally drivers are.

Hardcore fans have already been tearing up the European countryside on PC but now *Dirt Rally* has left Steam's Early Access paddock and will drift on to consoles in April.

Rally isn't the stunt-obsessed arcade racer that used to carry the *Dirt* name; it's an off-road time-trial sim. The slightest error will see you in the scenery, so understanding how your chosen car handles and listening to your co-driver is vital.

And there's more to rally driving than just 'slow in, fast out' and 'mind that ditch'. Nailing each stage requires mastering techniques such as the Scandinavian flick, which slides you gracefully around corners.

With over 70 stages across six different rallies, from Swedish snow to hard Greek dirt, each surface will require a different driving style. If your only one is to accelerate first and worry about steering later, *Dirt Rally* probably isn't the game for you.



[Words: Tom Wiggins]

BEST PS2 GAMES TO PLAY ON YOUR PS4



GRAND THEFT AUTO: VICE CITY

GTA III and *San Andreas* are also available but the high point of the series' PS2 period was easily *Vice City*, with its excellently realised recreation of Miami Beach in the '80s. The sheer size of *GTA V* has dated these games a little but *Vice City* is still a must-play of the wandering-around-causing-havoc-to-Africa-by-Toto genre.



TWISTED METAL: BLACK

With *Rocket League* the unexpected hit of the year, why not take a nostalgic road trip with this combat classic? *TMB*'s ghoulish take on a destruction derby will also let you take out the frustration of conceding a late goal in *Rocket League*. And who doesn't want to ride a tow truck with a massive spiked ball hanging off the back?



WAR OF THE MONSTERS

War Of The Monsters allows you to do two things: be a huge monster and smash up buildings. You can choose to take charge of a host of creatures including a giant ape, insect, eyeball and various robots, and fight against your fellow beasts – and if a building happens to get in the way... well, that's what insurance is for, right?



INCOMING

FEBRUARY

● XCOM 2

● FAR CRY PRIMAL

MARCH

● HITMAN

● UNCHARTED 4: A THIEF'S END

APRIL

● DARK SOULS 3

MAY

● BATTLEBORN

3

STEPS



...to a karma boost

2

Robots in wooden guise WOOBOTS

Wooden toys are boring, right? Chunky tugs and train engines that even an enthusiastic juvenile imagination would struggle to animate. But wait. These guys are cunningly articulated wooden vehicles that transform into robots! They're ethically sourced German beechwood, and they're spoiling for a bedroom battle against mass-produced petrochemical plastic toys. Kickstarted at the end of last year, WooBots come in five varieties, or you can buy the whole bunch.

from US\$35 / bamloff.com



Sipping the light fantastically SOLARTAB

Pocket-sized solar chargers gathering dust are evidence that science can't be fooled. If you want to harvest the sun's energy efficiently – or at least, using current photovoltaic tech – you need a big panel. This one is about the size of an iPad, yet can generate up to 5.5W. But it's the attached battery that makes the Solar Tab worth its weight: 13,000mAh of capacity with a 5V, 2.1A output is enough to charge your phone or tablet several times, and fast.

US\$140 / mysolartab.com



3

Hot water, only when you oughta NEST LEARNING THERMOSTAT 3.0

The third generation of the Nest thermostat brings with it the new ability to control your hot water schedule. You'll need a widget connected to your boiler to make it work, but just think how much money you'll save by being able to arrest your daily hot water cycle when you're not home to use it... money and, of course, fossil fuels. Also new for Nest 3.0 is a larger, higher-res screen on the thermostat with more options for how your temperature display is shown.

£200 / nest.com/uk

SORRY OPTOMA. 8 OUT OF 10¹ PREFER EPSON.



In a like-for-like test of HD projectors,
8 out of 10 people said they'd
choose to own an Epson over Acer,
BenQ, Optoma and ViewSonic.

We know for the ultimate experience you want only
the best images. **83%** of those we surveyed said they
view Epson as their first choice of projector. ¹

Find out more at www.epson.co.uk/CLO



1. Aug 2015: Epson blind test between Acer H6510BD, BenQ TH681+, Epson EH-TW5200, Optoma HD26 and ViewSonic PJD7822HDL.
For further info on the test and on the 3x brighter colours data please see www.epson.co.uk/CLO

2. Survey conducted by Futuresource Consulting Limited for the period from 2001 to 2015.

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TYKE BIKES

Don't lumber your little Olympians with rusty hand-me-downs

1 Felt Cruncher 24

Few Brit kids live in the sandy or snowy climes for which fatbikes are built. But terra-squashing 4in tyres are also perfect for getting little wheels over big roots.

£400 / feltbicycles.com

2 Calibre Ripple

High-street retailer Go Outdoors has been winning awards with its value-maxed bike range, and this chunky-tyred 20in Ripple looks like a trail smasher.

£350 / gooutdoors.com/cycling

3 Commencal Supreme 20

Well, this makes a mockery of our childhood. Rockshox suspension front (80mm) and rear (100mm), with hydraulic disc brakes and team yellow paint. Envious.

£1600 / commencal-store.co.uk

4 Lapierre Froggy 24

This 24in-wheel suspension bike looks ready to hit a World Cup race; and with Rockshox suspension, Shimano gears and freeride geometry, it pretty much is.

£1550 / lapierre-bikes.co.uk

5 Kona Shred 24

Canadian bike company Kona has been in the game for eons – and that experience shows in the Shred's big-name components and gnarly setup.

£500 / konaworld.com



Getting the size right

How old?

Age doesn't help much when choosing a bike size for your ripperette, as leg and torso length can vary wildly in young 'uns.

Wheel size

That said, the bikes here all have 20–24in wheels, putting them in the 7–13 age range. But you should go to a bike shop for fitting.

Ride with Allen

You know him. Allen Key? Hexagonal guy who adjusts seat and handlebar height. But if things get clownish, it's new bike time.

Hello? O, it's U!

HISENSE 65XT910

We're so giddy about high-contrast, high-colour OLED TVs that last month we gave LG's OLED set our TV Of The Year award – and we don't hand those out willy-nilly. But now, just as we had nearly saved up enough to actually buy an LG, Chinese TV supergroup Hisense has launched its new curved 'ULED' (Ultra LED) TV. It comes with similar snazzy picture claims, including 240-zone local dimming, 4K and High Dynamic Range (HDR) support – not to mention the inclusion of iPlayer, Netflix 4K and Amazon Instant Video. But the key difference is value: this 65in set costs about the same as a 55in LG OLED. Looks like we're about to find out what sort of brand snobs we really are.

£2300 / hisense.co.uk

It's purée academic

MASHA

It started last January, with the Nutribullet. Try a few smoothies, you thought, get some vitamins. But then came summer, and you had to get a Spiraliser to turn all your vegetables into spaghetti, and then you had to get a Waffle Rotator and a Bacon Toaster and a Jalapeño Probe, and now there's very little space in the cupboard, but you can't stop thinking about how creamy your mash could be, how smooth your guacamole, how silky your pancake batter (9th February, since you ask). Maybe you should sell the Cupcake Inflator. Or the car.

£35 / theorange.co.uk**DROP EVERYTHING AND DOWNLOAD...****Readbug** £9.99 per month / iOS

You know when you go round to your brother-in-law's house, and he has really classy magazines on his coffee table – such as *Cabinet* or *Dazed* – and you think, “I'm going to get some for my table”? Well, you don't, but what you will get is the knowledge that those high-price magazines impart, courtesy of this mag app, which gives you access to hundreds of creative and/or independent publications – more about these on p106. (Not to be confused with Readly, the app for your *Stuff*-level publications.)

IT'S A LOW-COST,
LOW-POWER
SOLUTION TO
MOVEMENT
AND GESTURE
TRACKING

GEST

US\$180 / gest.co

That looks handy.

Doesn't it just? The Gest is a motion-sensing strap-on with a mission to aid humans in their desire for mastery over the third D: a generation of geeks for whom multitouch and VR are the norm, who aren't satisfied with the mouse and keyboard as input devices. Oh, and if you're FaceTiming home about it, make sure you pronounce it 'jest'.

Wha-what? Like jest, not guest?

Yep. Remember when someone announced 'gif' was pronounced 'jif', and the internet went into spasm? Well, that... although it is presumably short for 'gesture'. Gest uses accelerometers, gyro and magnetometer sensors on its finger clips and main body to track movement and gestures. It's a relatively low-cost, low-power solution, in contrast to the likes

of Leap Motion, which was very snazzy in its ability to track your free-floating hand but brought significant processing demands.

What do I do with it, though?

That is yet to be ascertained. It's easy to imagine that, while wearing a VR headset, you might use two Gests to type on a virtual keyboard. A more day-to-day non-VR scenario might involve

Photoshop – if you're using a stylus, it's awkward to go back to the keyboard or mouse to change tools. A Gest on your other hand would let you assign shortcut gestures to commands, or manipulate onscreen objects. But these are slightly simplistic examples. The team behind Gest will be releasing a dev kit, so that all creators of virtual spaces can support the fingery peripheral.



Drifting FIAT 124 SPIDER

Underneath, this Fiat roadster is basically a Mazda MX-5. But it's OK, Mazda know about it. Whereas the MX-5 is an edgy, pointy thing (that we like), Fiat has gone for a more retro style, evoking its namesake 124 Spider from the '60s. It's using its 1.4-litre MultiAir II turbocharged engine, instead of the Mazda's non-turbo 1.5 or 2.0-litre options, but 138bhp and 177lb ft of torque sound good to us, especially as the MX-5's chassis remains largely unchanged. Classy round town; rear-drive drift mischief out on the bypass.

£17,490 (due summer) / fiat.co.uk



Shifting ZENOS E10 R

If both the Mazda MX-5 and Fiat 124 Spider options are too cushy for you, then this is worth a look. It's a new, faster version of the British-built back road and track day special, the E10 S. Sitting up front is a specially tuned version of Ford's 2.3-litre EcoBoost engine from the Focus RS. Sitting up back is you, wearing a helmet as a windscreen and wondering whether 350bhp and 349lb ft might have been beyond your skill set. And, at roughly twice the expected price of the 124, your bank balance.

£40,000 / zenoscars.com

DECIPHER ALLOW ME TO EXPLAIN...



#10 TWITTER LIKES

Craig Grannell



As part of its ongoing mission to eradicate anything unique about the service, Twitter has replaced 'favourites'.

Now, instead of marking a tweet with a star, you click a little heart, and this is referred to as a 'like'. You know, like on a certain other social network that Twitter clearly really likes and very much wants to be like. The logic behind the decision was outlined by product manager Akarshan Kumar in a blog post entitled 'Hearts on Twitter'. The star symbol, apparently, was confusing to new users: "You might like a lot of things, but not everything can be your favourite."

Only it's not that simple. Clicking that star became a means of bookmarking tweets, flagging them for follow-ups and

THE STAR, APPARENTLY, WAS CONFUSING... BUT IT WAS MULTIPURPOSE!

notifying friends you'd spotted what they said. They were multipurpose stars!

But the notion of a heart — of a like — is often less flexible or suitable. It implies endorsement, love, and affection — values users may not want to apply to a tweet that they nonetheless want to flag to others. Given that Twitter is frequently a charged political tool, what happens when someone posts a horrifying news report? I also wonder how women being harassed on Twitter will react to a symbol hinting at romance and emotion.

Perhaps I'm now just an old social media git yelling at a heart-shaped cloud. For all I know, tweeters worldwide are sighing with relief. But a quick glance at replies to Twitter's own tweets suggests otherwise, and it really does feel like a misstep that reduces the flexibility of a previously versatile feature.

A GOOD DAY TO BUY HARD?

Panasonic Toughbook CF-20

£2660 / panasonic.co.uk



The tablet part of the Toughbook detaches easily for mobile workers.

This battle-hardened convertible can easily suffer the slings and arrows of modern life.

● Float like a butterfly

A spillproof, rainproof, dustproof magnesium chassis with an integrated carrying handle... doesn't sound like the kind of thing you'd want to pop down to the coffee shop with, hmm? Well, prepare your Bear Grylls Surprise Face™, because the Panasonic Toughbook CF-20 weighs only 1.76kg all in. The display section, which can be entirely separated from the keyboard base to

become a Windows 10 tablet, is just 950g. It is kinda chunky: 16.4mm thick and 33.5mm with the base. But, big – top bonus: proper Ethernet and VGA ports!

● Sting like a bee

Hiding behind the 10.1in, 1920x1200, 10-finger touchscreen – with optional waterproof digitiser pen – is a 1.1GHz Intel Core vPro processor, with 8GB of RAM, a 256GB SSD drive and Windows 10 Pro. So 'sting like a bee' might be over-egging the CF-20's abilities. 'Relentlessly wander like a wildebeest' is pretty accurate, however, because both display unit and keyboard base unit have

hot-swappable batteries for up to 14 hours of typing stamina.

● Who's it for?

Soldiers, site managers and engineers. The kind who won't be worried about the high price as the company (or taxpayer) is paying. But if you can afford it, and if you can overlook the looks, the tough build makes it an incredibly useful bit of kit. Waterproof enough to survive the rowdiest family activity, it's jam-packed with connections, 4G, cameras, GPS and two (two!) card readers. You can use it as a laptop or tablet, or hang it from its handle. In a sea of effete MacBooks, this a rugged rebel headturner.

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(TWO!) CARD
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YOUR MONTH JAN

December's deceased and with it the year; no worries, though, for January's here!



08

THE HATEFUL EIGHT

Three hours of Tarantino Western in which all the characters are bad guys and all are stuck indoors during a blizzard? Sounds like our kinda January. The music should be good, too, with legendary composer Ennio Morricone writing the score.



14

KATHERINE RYAN: KATHBUM

The Apex, Bury St Edmunds
Fearless, sassy and opinionated – the kind of things you'd never say to her face. But the chances of face-to-face combat are minimal if you're just spectating.



21

THE LIBERTINES

Hydro Arena, Glasgow
Arriving over 10 years after their previous release, 2015's *Anthems For Doomed Youth* was worth the wait. Let's see if Pete Doherty and pals can keep it together over this 19-date Euro tour, kicking off in Glasgow.



23

THE ADVENTURE TRAVEL SHOW

Olympia, London
Your New Year angst and mild cirrhosis should have faded by now, leaving you with a fervent desire to spread your wings. Even if you only get as far as this exhibition hall.



25

LEGEND

Blu-ray, DVD
Dismissed by some as glorifying the antics of the Krays, *Legend* is nonetheless a riveting watch. Tom Hardy's dual role as both twins is remarkable, while the support from Christopher Ecclestone, Emily Browning and Paul Bettany is strong.



29

LEGO MARVEL AVENGERS

All gaming formats
Take the figurative reins of your favourite Avenger in order to act out storylines from the various films. Unless any of them have actual reins. We've rather lost track.

WIN



WIN A WHALE-WATCHING VOYAGE WITH **IN THE HEART OF THE SEA**

Wales! Famous for its leeks, its daffodils and its occasionally successful rugby team. No, hang on... WHALES! Famous for their majestic beauty, their great intelligence and their aquatic mystique. How would you like to go looking for some?

Win this month's competition and you'll be sailing into the waters of the North Minch, one of the UK's most recognised sighting areas for marine life. It's all thanks to *In The Heart Of The Sea* – **in cinemas now** – the latest blockbuster from Oscar-winning director Ron Howard, which tells the true story of a whaling disaster and its chilling aftermath.

The main prize is a £1500 trip for two people including three-night hotel stay in Inverness with breakfast, whale-watching cruise, self-drive hire car and travel insurance. The winner will also receive a set of premium *In The Heart Of The Sea* merchandise including match case, anchor keychain, sunset crewneck sweatshirt, rope tote, blue washed hat, flask and shot set in wooden box.

HOW TO ENTER

For your chance to go looking for actual whales in the actual sea, just sail to **stuff.tv/win** and answer this question:

IN THE HEART OF THE SEA STARS WHICH ACTOR, ALSO SEEN IN THE AVENGERS AND RUSH, AS FIRST MATE OWEN CHASE?

A ... Chris Hemsworth

B ... Chris Moyles

C ... Chris P Pancakes

HURRY!
COMPETITION
CLOSES
**10 FEBRUARY
2016**

Terms & conditions **1** Open to UK residents aged 18 or over. **2** Entries close 11.59pm, 10 February 2016. **3** Prizes are as stated. **4** Prizes are non-transferable. **5** Only one entry per person. **For this competition's full terms & conditions see www.stuff.tv/win**
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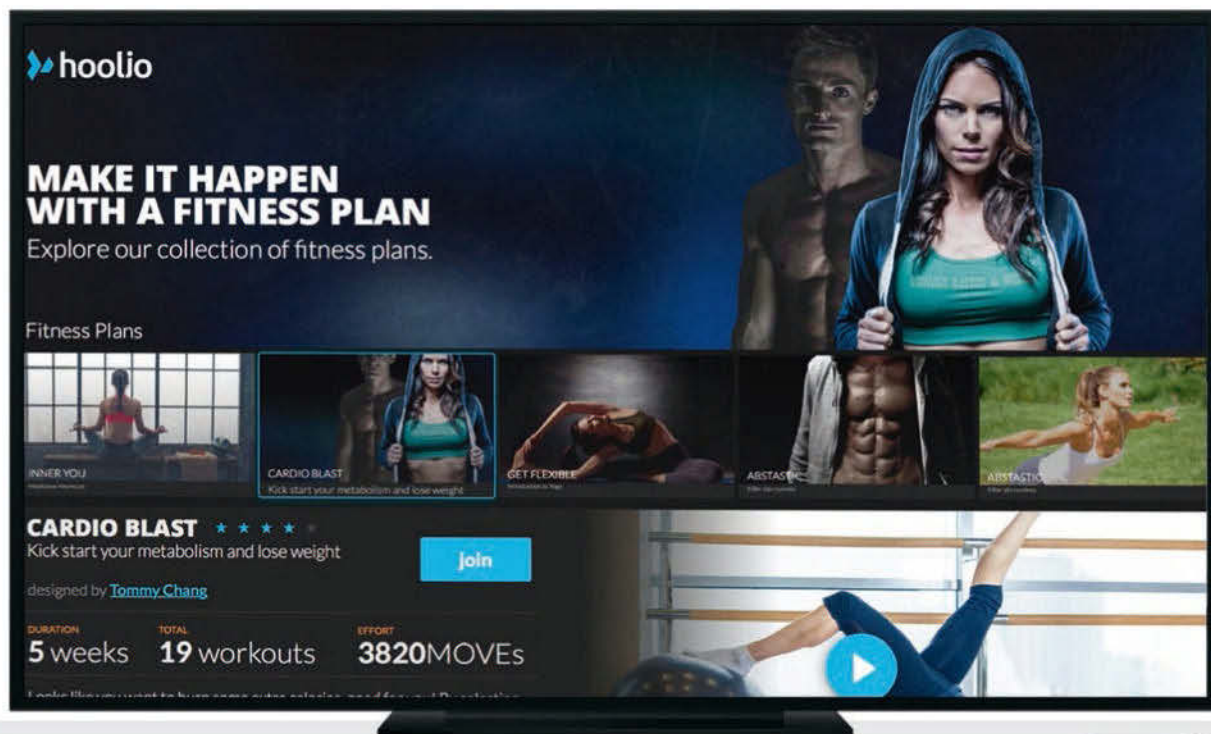
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GADGETS WILL MAKE A MACHINE OF YOU



SUPERCARGE YOUR TRACKING

Exercise is gruelling enough without doing maths at the same time, so let tech count your reps, heartbeats and more



Hoolio

from £free / hoolio.com

If something is aiming to be 'the Netflix of fitness', that doesn't mean you're meant to wallow in front of it all weekend, mainlining Dr Pepper and Pringles, and only getting up to answer the door to the pizza delivery guy – quite the opposite, in fact. Hoolio lets you and your friends participate in high-tech workout videos, initially drawn from YouTube but soon to be joined by its own original workouts, made in partnership with TechnoGym. It's more Mr Motivator than Mr Robot.

The idea is to remove the isolation of online workout videos, so you can dial in friends (a bit like a sweaty Skype call) and take on a session together. Taking part as a team (it supports up to four people per session) adds an element of friendly competition – nobody wants to be the first to say they can't hack the

pace. Hoolio has seen completion rates of workouts hit 80%, rather than the 20% seen when people go solo.

"By working out with a partner, you're more motivated and you're going to get better results," co-founder and CEO Nicholas Douzinas told us. "They don't necessarily work out for the entire time," he admits, "but as long as people are connected, we can motivate them."

Hoolio is primarily web-based (see how to get it on your TV via Chromecast, right) but it also runs on Apple TV, and there's an iOS app that functions as a remote control. Use it while wearing any HealthKit-compatible activity tracker (an Apple Watch, for example) and it can display live heart-rate info on the big screen, and there are plans to introduce live feedback based on how hard you're working. Good news for everyone who isn't a personal trainer.



Hero quest

Cardio, pilates and yoga form the core catalogue of workouts but Hoolio wants to offer all kinds of special sessions throughout the year, including one designed to give you the physique of a superhero. Presumably that means post-not pre-snack Bananaman.



Telly tubby

Don't have an Apple TV? Hoolio runs in Chrome, so just pick up a Chromecast and you can beam your browser tab to the telly and feel the burn working out in the living room. There may be more space there but try not to drip sweat all over the new carpet and sofa set, eh?



Alternatively... Zova

Zova also works with Apple TV and supports the Watch for heart-rate monitoring, but its scope of exercises is more limited. £free / zova.com



Gymwatch

If you spend more time pumping iron than an Arnie impersonator, the Gymwatch is your ideal spotter. Whether you're using free weights or gym machines it'll scrutinise your arms or legs (it can be worn on either) to count reps and check you're doing each exercise correctly, with real-time feedback on the iOS and Android app. It knows over 900 movements and will correct you like a tiny robotic personal trainer. **€100 / gymwatch.com**

**BEST FOR
COMPETITIVE DADS**



Nabi Compete

Getting kids to move isn't normally the hard bit, it's sitting still – but this prog-friendly activity tracker connects to an iOS or Android app over Bluetooth and turns steps into food for a virtual Tamagotchi living inside a phone. You won't need to buy your nipper a £600 phone to use it – the Compete is sold in pairs so you can connect both of them to yours and challenge Isambard Jnr to a distance goal. Well, a win's a win, right? **US\$40 / nabitab.com**



BSX Insight

While most trackers ride on your wrist, the Insight's sensor has its own compression sleeve that's worn on the calf; this takes oxygenation readings directly from your muscles, so it knows how hard you're working. If you want to measure heart rate as well, it's compatible with ANT+ monitors. Back at base, check out the data in the Android or iOS app to work out where you can push a bit harder. **from US\$300 / bsxinsight.com**



Track My Fitness

It's quite possible you're already wearing a fitness tracker. It's called your smartwatch. Track My Fitness from Vimo Labs (available for the Apple Watch and Android Wear) supercharges the sensors in your wearable, detecting what exercises you're doing, tracking reps and calories burned, with routines and instructions delivered by a 'personal trainer'. New workouts are added every week. **£free / trackmy.fit**



Whoop

As if any more proof were needed that pro athletes get treated differently to the rest of us, they have their own tracker. Designed to be worn 24/7, Whoop's wristband collects data on heart rate, body motion, skin conductivity and ambient temperature over 100 times a second, and feeds it back to an online analytics platform where a coach can make sure they're not being overworked, poor lads. **£poa / whoop.com**

What's next?

For sporty types who hate wearing a tracker...

No matter how discreet they've become, fitness trackers still require you to wear something, and that can be distracting. What if they could do their thing without any extra kit at all, just using the phone in your pocket? Researchers at MIT are working on a project called BioPhone, which will allow your phone to monitor your heart rate and breathing using only its built-in accelerometer, meaning you could leave it squirreled away in your shorts, or even in a backpack, and it'd still do its thing.

It works best when you're recovering and there's not too much noise to interfere with

the tracking, but researchers have managed to get within a beat or two per minute when measuring heart rate and a quarter of a breath when monitoring respiration.

If that's not quite accurate enough for you and you'd rather not carry your phone at all, how about a tracker you can swallow? Elsewhere at MIT a team has developed a pill-sized prototype sensor that's so small it can sit in your stomach and use a tiny microphone to listen in to the sounds of your heart beating and your lungs expanding – it's essentially a stethoscope you eat. This sensor then feeds the data to a receiver up to three metres away and still works



while you're digesting that burrito you had for lunch.

It's probably better suited to gym-based activity than a jog round the block and it'll only stick around for a day or two before, er, reappearing, but this could be ideal for anyone who prefers running *au naturel*.

BEST FOR
DIGITAL DALEY THOMPSONS



Moov Now

from £60 / moov.cc

What's the story?

While it might look like just another wrist-mounted movement monitor, the Now is actually more trainer than tracker. It can count steps and snoop on your snoozing, but that data is the hardest to track down in the app; the real focus is on active minutes in whatever form they take. That can be climbing a few stairs or jogging round the park, but proper workouts are its *raison d'être*. It has its own bank of guided sessions, complete with voice coaching and rep counting, plus it'll also pair with third-party heart-rate monitors for even better muscle-making monitoring. Quite the show from a £60 strap.

Is it any good?

The Now relies entirely on your phone, meaning you won't be able to run too far from your handset, but the quality and accuracy of its tracking and training is impeccable. Because sessions are selected at the start, the Now knows what motion to look for and can guide you to great effect as you gurn and grimace through seven-minute ab-crunchers, sprint intervals and bicycle burners. Moov isn't interested in motivating you to meet your daily step goals; it'd rather replace your gym subscription and get you properly burning off the burgers with real-world workouts on your wrist.

Tech specs

Weight 6g **Battery** 6 months **Connectivity** Bluetooth

STUFF SAYS ★★★★★

A superb always-there trainer to get you working out and burning off

Misfit Shine

£50 / misfit.com

What's the story?

A sliver of aluminium to catch the eye of Apple advocates, the Shine's shell hides smarts as sleek as its exterior. A quick double tap on its top brings up an array of white lights on the clock-like display that show your progress as a percentage of a circle, followed by pulsing lights to indicate the current time. You can clip it to yourself, wear it on your wrist or around your neck, or buy Misfit-compatible socks and T-shirts. It's also fully waterproof to 50m, so it can be used as a swimming sensor (there's even a Speedo edition with extra swim-tracking skills).

Is it any good?

Misfit hasn't sacrificed substance in its delivery of style. A range of activity tracking options, including swimming, cycling and yoga, can be deployed with a triple tap; but you have to choose which one it should activate in advance via the app, which isn't ideal. That said, exercises are easily reassigned after you've finished and it generally tracks accurately, except when it's stuck to your shirt. We're less keen on the Misfit app – discovering in-depth data requires some delving – but as a standalone solution to help you hit your daily anti-slob targets, the Shine is a sterling bit of kit.

Tech specs

Weight 9.4g **Battery** 6 months **Connectivity** Bluetooth

STUFF SAYS ★★★★★

The sleek Misfit Shine packs plenty of passive tracking smarts to get you moving



BEST FOR
SMART SWIMMERS

BEST FOR
NOTIFICATION NERDS



Polar Loop 2

£95 / polar.com/uk

What's the story?

Employing a small touch panel for scrolling through time, target progress, calories burned and steps taken, the Loop 2's simple interface is built on a battery that's good for five days at worst. The cut-to-fit comfort of the rubberised Loop is perfectly wearable if you can stomach its shiny strips, and you can splash through 20m of the wet stuff before it'll conk out. Its LED dot display definitely won't go unnoticed: it's bright to the point of being painful, so there's no issue spotting it to silence the alarm, while perpetual notification missers will benefit from the Loop 2's optional vibrations for smartphone alerts.

Is it any good?

As step counters go, it does its duty better than many. Daily targets are presented as a gradually filling bar and stride-counting accuracy is on a par with competitors; but, lacking a built-in heart-rate sensor, it frequently under-rewards anything that doesn't involve vigorous wrist movements. 'Time to move' reminders help you avoid the dreaded inactivity stamp, but stats are often easier to analyse via Polar's web platform than in the slow-to-sync app, so only the notifications justify the price hike over similar (and more stylish) trackers.

Tech specs

Weight 38g **Battery** 8 days with 24/7 activity tracking and 1h/day training **Connectivity** Bluetooth

STUFF SAYS ★★☆☆☆

The Loop 2 is more than a pedometer, but not quite a fitness tracker either

Jawbone Up Move

£40 / jawbone.com

What's the story?

You can slap the Jawbone Up Move on your wrist with the bundled multicoloured strap, but it's happiest when slotted into its rubber housing and attached to a belt, bra or anywhere else you feel happy dangling a pebble of plastic. It's about as svelte and subtle as a child's toy, but it feels pretty robust when holstered on the hip, which also happens to be the best step-tracking position. It's all very straightforward: different clicks initiate different monitoring modes and the bold light-up bars on its round frontage make it easy to see what it's up to.

Is it any good?

The Move is generally a spot-on surveyor of strides. Sure, it detects a few phantom paces here and there, but for everyday monitoring it's reliable enough to be useful. Its colourful companion app instantly illustrates your step tally and sleep data in handy vertical bars, with the option to input food, set goals and see get-fit tips for the full Smart Coach experience. Syncing is manual, which means it has a battery life measured in months, but that severely limits its motivational abilities. It is good at what it does, but it's hard to get away from the feeling that it's essentially a glorified pedometer.

Tech specs

Weight 6.8g **Battery** 6 months **Connectivity** Bluetooth

STUFF SAYS ★★★★★

A penny-saving pedestrian package from Jawbone, but the Up Move is no more than that



BEST FOR
CLIP-ON COUNTING



Sleep tracking: is it worth it?

"Sleep tracking has the potential to be more useful to the wearer than to a doctor, as it could help people notice the effects of their behaviour and consumption during the day and the effect on their sleep," says GP Richard Harkness.

"However, it may help a doctor see the impact of conditions such as asthma on people's sleep, while those with obstructive sleep apnoea (or a suspicion of it) could help track just how often they are waking at night."



CONNECT YOUR CLOTHES

Smartwatches and fitness bands are great, but tomorrow's fit-tech will be woven into the fabric of your workout gear



Athos

from US\$350 / liveathos.com

You don't actually need special clothes to tell you what's going on with your body – just go for a run in a grey T-shirt and dark patches will gradually form under your armpits to show you've been working hard. The only problem with sweat is that it doesn't provide much data on which muscles were working – and it doesn't matter how hard you try, it just won't connect to any of the fitness apps available. Sweat 2.0 can't come soon enough.

In the meantime, there's Athos – an outfit of shirt and shorts (for men and women) that's riddled with sensors feeding your vital stats to the Core, a wearable receiver that transmits it all to the app via Bluetooth. Woven into the shirt are two breathing sensors, two heart-rate sensors and 12 electromyography (EMG) sensors,

which measure muscle activity using the electrical signals produced when they move; the shorts have eight EMG sensors and four heart sensors. There are no breathing sensors in the shorts, presumably to avoid damaging the Core with any post-lunch wind.

All of this info is fed to the app in real time, so you can see exactly which muscles are working and how hard, plus calories burned and average and peak heart rates. With all that info on board it can help you to avoid injury and tell you if you're hitting the showers too early, or neglecting certain areas when you go to the gym – which should help you gradually take things to the next level and avoid ending up looking like Johnny Bravo. It's the kind of stuff you used to have to hook yourself up to all kinds of scary-looking machinery to find out.



Material girl

Athos's gear is made from a breathable, sweat-wicking combination of nylon and Lycra to keep you dry and cool. It's also water-resistant, so you can use it for all-weather running and cycling rather than being confined to the gym.



Personal trainer

Athos will also count reps for you and make sure you're doing each exercise with correct form. In fact, pretty much the only thing it can't do is the actual workout for you. Shame.



Power play

The Core's battery should be good for around 10 hours of exercise. So unless you're planning on taking part in a triple-deca-ultratriathlon (that's a 71-mile swim, 3355-mile cycle and 786-mile run) it should last a few strenuous training sessions before it needs recharging.

BEST FOR
EFFICIENT EXERCISERS



Digitsole Warm Series

If you thought putting your pants on straight from the radiator was the ultimate in winter luxury, Digitsole's Warm Series will blow your socks off. These heated, app-controlled inner soles can be stoked up to 45°C and will pump out heat for up to six hours. They also count your steps and calories burned, so the warm fuzzy feeling of accomplishment should stretch further than just the soles of your feet. €200 / digitsole.com



Antelope

Remember those belts in the Argos catalogue that promised to give you a six pack by electrocuting your abs? Antelope's suit is essentially one of those you can wear out and about. Electrodes are woven into it, with a Bluetooth-connected battery pack and an app to control how it buzzes you depending on your exercise programme. The idea is it works more muscle fibres, so you get better results with the same amount of effort. US\$1600 / antelope.club



LumoRun

Stuffing something in your running shorts isn't normally the way to nail a new PB (unless it's a rocket) but LumoRun's sensor fits into a pocket in the back of special strides to log cadence, bounce, braking, stride length, pelvic rotation and ground contact time. The app gives you real-time audio feedback via headphones, so you can decide whether you'd be better off just replacing it with a rocket after all. from US\$150 / lumobodytech.com



Hexoskin

It looks like a wetsuit and sounds like something from a low budget sci-fi movie, but the Hexoskin might just be the cleverest exercise kit around. Worn underneath your gym clobber, its sensors feed data to a tiny Bluetooth pod. It measures everything from heart-rate variation and breathing volume to your sleep (if you can get to sleep in it, that is). No wonder NASA has given them to astronauts. from US\$400 / hexoskin.com

What's next?

We see inside Asics' secret running lab

For a runner, visiting Asics' Institute of Sport Science (ISS) in Tokyo is like getting to snoop around Apple's R&D lab. The Asics approach to making trainers is like OS development: each shoe is fine-tuned and updated before the next version is released.

Looping around the building is a 350m running track with three lanes: two professional surfaces like those used in the Olympics and a third made of asphalt, as used by us pavement plodders. This continues into the building to create a 50m straight, where motion capture cameras gather mind-boggling amounts of biomechanical data on

everything from knee angles to foot strikes, while force plates underneath the tracks combine with markers on the trainers to let scientists see which parts of the shoes are stretching excessively.

Up on the roof, a man is running up and down a mechanically adjustable ramp. A sensor in his shoes helps Asics measure how running motions differ on slopes, so it can design trainers specifically for hill runners. It's the kind of attention to detail required to make each new line of trainers incrementally better.

But our favourite zone is the material testing lab. In one corner, a pair of robot feet do continuous step-ups to test



the flex of the upper; across the room a robotic leg moonwalks across a puddle to measure grip, and a row of tiny maces bob up and down on a spinning wheel of fabric to test the thread.

And the good news for amateurs is that this lab tech

is spreading to the high street. The Foot ID system films you running on a treadmill to find out your degree of 'pronation' (the way your foot rolls when you run) and takes a 3D scan of your foot so it can be matched to a specific model of shoe.

**BEST FOR
ABSENT-MINDED ATHLETES**



Basis Peak

£170 / mybasis.com

What's the story?

Unlike most fitness watches, which require the user to tell them the activity they're about to embark on in order to track it effectively, the Basis Peak captures a continuous stream of movement and physiological data and automatically identifies what you're up to without asking — it'll even know when you've nodded off at the end of the day. On the back is an optical heart-rate tracker, and it can take the temperature of your skin. It'll connect to your phone for call, text, calendar and email notifications, but with its monochrome screen it's more Pebble than Apple Watch.

Is it any good?

The Peak's auto detection works very effectively; the only problem is that it struggles to tell the difference between pausing to tie a shoelace and a genuine, premature wheezing breakdown. That means it often chops your runs into smaller chunks, making it hard to compare times on your regular route. Even with its always-on heart-rate monitor, the battery will last the best part of a week, although for an accurate pulse you do need to crank up the strap tension. Phone notifications are unobtrusive but limited to basic functionality.

Tech specs

Tracking Steps, running, cycling, sleep
Display 1.26in, 144x168 **Connectivity** Bluetooth
Heart-rate monitor Yes **Waterproof** 5 ATM
Battery 4 days **Weight** 27g (without strap)

STUFF SAYS ★★☆☆☆

The Basis Peak has great battery life and innovative tracking, but it doesn't collect data in a useful way

Garmin Fenix 3

£380 / fenix3.garmin.com

What's the story?

If you can think of it, the Fenix 3 probably tracks it: steps, sleep, various sports... and it's even got built-in weather, compass, altimeter, barometer and thermometer apps. It's also a full-on smartwatch with notification support for everything from emails, tweets and WhatsApp messages to football scores, and it'll control your music. The watch itself is big, but stylish: you could wear it with a suit and it wouldn't look out of place. Each button has two functions, the secondary one accessed via a long press. At first it's difficult to remember what everything does but you pick it up before long.

Is it any good?

Hit the start/stop button, choose your activity, wait five seconds for a GPS signal and you're off. The screen can be customised to show different metrics, but there's no heart rate or cadence tracking without a chest strap. It's the swim tracking that makes the Fenix 3 really stand out: it shows your pace, route, distance, calories and stroke rate, which puts even a swimming instructor to shame. Garmin's Connect app is required for syncing, and it works with apps such as Strava and MyFitnessPal.

Tech specs

Tracking Steps, running, cycling, swimming, skiing
Display 1.2in colour LCD, 218x218 **Connectivity** GPS, GLONASS, Wi-Fi, Bluetooth **Heart-rate monitor** No
Waterproof 10 ATM **Battery** Up to 50 hrs **Weight** 82g

STUFF SAYS ★★★★★

The Fenix 3 is pricey, but it's a proper smartwatch that's unbeatable for serious triathletes



**BEST FOR
MULTISPORT MAVENS**

BEST FOR RUNNING TO THE BEAT



TomTom Spark Music + Cardio

£190 / tomtom.com

What's the story?

Forever frustrated by slapping a smartphone in an armband or clutching it in your perspiring paw while you run? 3GB of internal memory means you can load TomTom's Spark with tunes, hook up a pair of Bluetooth headphones, leave your phone on the sideboard and get on with your 10K. Having told it which activity you want to track, it'll record steps, pace, distance, sleep and calories crushed using GPS and the onboard heart monitor. The sturdy silicone strap and pop-lock buckle are well suited to sports but its hulking four-way 'button' gives it a chassis that only a mother could love.

Is it any good?

It's best to select a playlist before you start because music controls can be a pain to use on the move, which is a real let-down considering the interface for accessing stats and training options is quick and intuitive. The heart-rate tracking isn't accurate enough to be useful but the mapping did a pretty precise job of following our jogs, on or off-road and under tree cover (although battery life took a hit). Once you're home you can access detailed data via the app or TomTom's MySport web platform, although it can take its time to sync and upload.

Tech specs

Tracking Steps, running, swimming, sleep **Display** 22x25mm, 144x168 **Connectivity** GPS, GLONASS, Bluetooth **Heart-rate monitor** Yes **Waterproof** 5 ATM **Battery** Up to 3 weeks (5 hrs GPS + music) **Weight** 50g

STUFF SAYS ★★☆☆☆

Unless you must have music on your wrist, there are better options out there to accompany your workout

Withings Activité Pop

£120 / withings.com

What's the story?

A cheaper alternative to Withings' standard Activité, the Pop is a traditionally styled ticker with an analogue approach to activity tracking. In the bottom right of the face there's a hand that tells you how close you are to hitting your daily target, which you set in advance via the Health Mate app. That's also where you can find your in-depth tracking and sleep stats and compare them with your Pop-wearing friends. The straps are interchangeable, meaning you can clip in new colours or, in theory, have one custom made. At a glance it could just be a normal watch – and that's a good thing.

Is it any good?

The Pop's colourful face is clear and uncluttered, which makes for great contrast against the white hands. It'll detect more vigorous movement and log it as running, giving you credit for that desperate dash to the bus stop. It's waterproof too, and will automatically pick up swimming, although that's where its tracking skills end. Still, it's accurate and the battery lasts months, making it a wearable you can really live with – with just enough smarts to satisfy those who don't devour data. It'll never be a full-on sports watch, but it will track you in style.

Tech Specs

Tracking Steps, swimming, sleep **Display** Analogue **Connectivity** Bluetooth **Heart-rate monitor** No **Waterproof** 5 ATM **Battery** 8 months **Weight** 37g

STUFF SAYS ★★★★★

A sleek step-tracker for those of simple tastes and sophisticated wrists

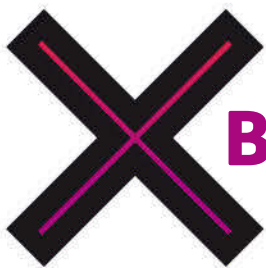


BEST FOR LOOKING LIKE A WATCH



Follow your heart

"Heart rate is more important than tracking anything else," GP Richard Harkness says. "Home readings are now thought to be more valid than clinic readings, so both you and the doctor benefit from this information. Just don't get obsessive. If you don't have diagnosed high blood pressure, testing it once a month would do. Then, if you're getting high readings, step that up to 1-2 times a day. If those readings persist, always speak to a healthcare professional."



BE YOUR OWN DIGITAL DOCTOR

Stay away from the scalpel but be sure to keep these health-monitoring gadgets close to hand



Qardio

from £100 / getqardio.com

Playing doctor and self-diagnosing with the help of Nurse Google is normally a surefire way to turn yourself into a hypochondriac, but not if you've got the right tools to hand. Qardio's fleet of day-to-day health gadgets allow you to keep track of three vital signs: blood pressure, heart rate and weight.

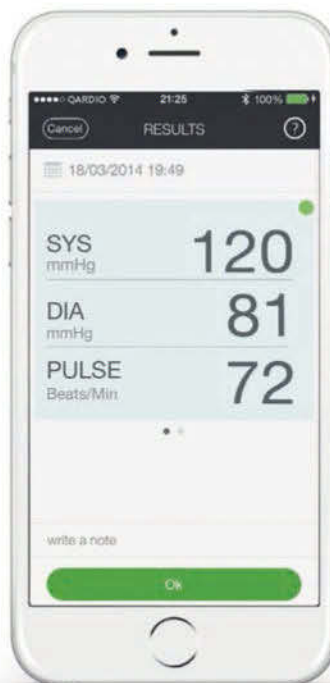
The **QardioArm** (£100) might look like a headphone amp, but it monitors your blood pressure rather than sprucing up tunes (although it'll also pick up on any irregular rhythms from your ticker). All the data is sent over Bluetooth to your phone, which can be paired with a tap, and it's all plotted on charts to help you spot changes. The cuff doubles up as a cover when it's not in use.

If you want more deets on your beats, the **QardioCore** (£75) is a chest strap that's designed for everyday

use in mind, not just when you're out running a triathlon. It can also pick up on stress levels, body temperature and respiratory rate, plus it'll record all the things an activity tracker around your wrist would monitor and send it all to the Qardio app.

And then there's the **QardioBase** (£130) — a sleek set of smart scales that look like they could've been designed by Nest. In fact, they look so chic it's almost a shame to stand on them. But you should, otherwise they won't measure your BMI, muscle mass, body fat percentage, water and bone composition and standard weight. Shed some pounds and you'll be rewarded between your feet.

All of Qardio's kit connects to the same app, plus it'll integrate with Apple's HealthKit, so you can build a complete picture of your health.



Alternatively...
Withings Blood Pressure Monitor

This app-assisted armcuff turns your vital signs into a simple chart on your screen that's colour-coded and easy to understand.
£110 / withings.com



23andMe

Who you inherit your genes from doesn't just determine whether you think coriander tastes like soap, or if you can roll your tongue (which is disputed anyway); it can tell you all sorts about your health. 23andMe's at-home DNA tests don't require any blood; simply send off a saliva sample and it'll be analysed for over 100 conditions and bodily traits you might've been unaware of, from lactose intolerance to earwax type. £125 / 23andme.co.uk



Prana

Stop slouching. Come on, we can see you doing it. If you had one of Prana's breathing and posture monitors we wouldn't have to shout at you. It sits on your waistband and works out whether you're sitting properly (and breathing properly as a result), pinging your phone if you could be sitting up straighter. If you want, you can even play a little game. We like to call it Sit Up Straight Or You'll End Up Looking Like A Hunchback, Idiot. £tba / prana.co

BEST FOR
CALORIE COUNTERS



HealBe GoBe

Wearing the GoBe is like having a step tracker for your mouth. While plenty of fitness bands will tell you how many calories you've burned, that won't mean much unless you know how many you've shovelled into the furnace in the first place. GoBe's wrist-riding calorie counter calculates your intake by measuring changes in the glucose levels in your skin. So there's no use pretending you didn't have that doughnut earlier. US\$300 / healbe.com



Kokoon

Insomniacs all need a set of these wireless noise-cancelling headphones, which play snooze-inducing sounds to you through their padded, ventilated lug huggers – be it music, podcasts, audiobooks or things from Kokoon's own catalogue. Using an EEG sensor, they'll know when you've dropped off and will fade out, while the app monitors your sleep cycles and wakes you up again when you're not too deeply under. US\$220 / kokoon.io

What's next?

Temporary tats with staying power

Just because you've come to regret that tribal ink you got round your upper arm when you were on your gap year in Thailand, it doesn't mean all tattoos are a bad idea.

Chaotic Moon, a tech startup from Texas, has developed a temporary biotech tattoo that's capable of reading your vital signs directly from contact with your skin.

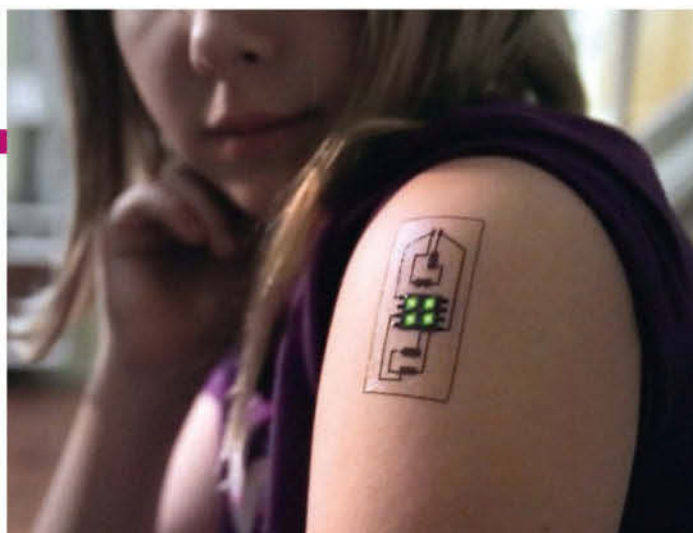
It uses electroconductive paint to send data from the sensors to a microcontroller, which then sends the info to an app over Bluetooth. They stick to the skin just like normal temporary tattoos do, using a wet flannel held over the top to activate the adhesive, which

will then wash off or peel away over the course of a day or two.

This so-called Tech Tat is able to pick up on all the signals a wearable fitness tracker would: heart rate, temperature and blood pressure. It doesn't need to be worn on the wrist, so you can hide it away under your clothes.

In a world where it often feels quicker to study for a medical degree than get an appointment to see a doctor, Chaotic Moon sees a time when Tech Tats could be worn instead, with the doctor only calling you in if an issue comes up in your results.

Chaotic Moon isn't the first company to explore the idea.



Researchers at the University of California came up with a temporary tattoo that could use sweat from your body to power other small wearable devices, and graphene has been used in combination with metallic fibre by a team in Korea to create components

so thin they can be attached to the skin as displays or health sensors.

If the idea of getting a Deus Ex-style augmentation or sticking magnets under your skin makes you feel a little squeamish, a Tech Tat might be a good place to start.

SMART
TESTED
SCALES

BEST FOR
FITBIT FANS



Fitbit Aria

£100 / fitbit.com

What's the story?

The Aria creates its own Wi-Fi hotspot to make setup seamless and sends weight, BMI and fat percentage info to your Fitbit account. It uses average weight to recognise up to eight users automatically, so your stats are safe from harm. Fitbit devices aren't compatible with Apple's HealthKit, but apps such as Sync Solver can fix that. Fitbit's iOS and Android app is pretty simplistic (the desktop version offers more detail) but it's fine for inputting calorie info and checking that you hit daily goals. It also syncs seamlessly with Fitbit's fitness monitors so, in theory, you should see a correlation.

Is it any good?

If you own a Fitbit health tracker the Aria is ideal. The combination of activity, weight and fat data builds a useful health profile and, thanks to the simple but effective smartphone apps and detailed online software, everything works seamlessly. In black or white glass, it's also the best-looking smart scale in this test (or anywhere), with a crisp, scrolling screen that displays a surprising amount of information. It takes its time to calculate and even longer to transfer data, but being wireless removes the need to have your phone on you: just hop on daily, as you would a standard set.

Tech specs

Stats tracked Weight, BMI, fat % **Battery** 6 months
Display Backlit LCD **Connectivity** Wi-Fi
Compatible products All Fitbit trackers

STUFF SAYS ★★★★★

Thanks to the all-encompassing Fitbit ecosystem, the Aria remains the easiest way to track your vital statistics

Tanita RD-901 Bluetooth Body Composition Monitor

£140 / tanita.eu

What's the story?

The self-crowned 'world's most accurate home-use wireless body composition monitor' goes way beyond basic weight and BMI. In total it records 10 measurements including bone mass, basal metabolic rate (the amount of energy you expend each day when at rest), visceral fat and muscle mass. It's an impressive list that should help paint a complete picture of your health – assuming you know what it all means. The scales connect via Bluetooth to any iOS device (iPhone 4 and newer) and use a traffic light alert system: green is healthy, yellow means borderline and red equals a fridge embargo.

Is it any good?

We appreciate the depth of data available from the RD-901 but the setup lacks simplicity. Connecting via Bluetooth really shouldn't be this complicated and the display looks more like a cheap digital watch. Still, you'll be treated to an enormous amount of information. The Health Planet app is well laid out, but understanding just what's being recorded almost takes a degree in sports physiology (or at least a thorough Googling).

Tech specs

Stats tracked Weight, BMI, fat %, muscle mass, physique rating, bone mass, visceral fat, BMR, metabolic age, total body water **Battery** 6 months **Display** LCD
Connectivity Bluetooth 4.0 **Compatible products** iOS

STUFF SAYS ★★★★★

Like having a full medical check morning, but you'll need to be clued up to make the most of the data



BEST FOR
STAT MONKEYS

BEST FOR
GETTING STARTED



Wahoo Balance Bluetooth Smart Scale

£70 / wahoofitness.com

What's the story?

Wahoo's Balance is a value option with a basic but bathroom-friendly design. It'll record your weight and BMI quickly, accurately and consistently, before pushing the data via Bluetooth to either the Wahoo Wellness app for iOS, or the likes of HealthKit and MapMyFitness. The Wellness app itself offers simple graphs, lists and charts to help you plot weight changes and makes it easy to see where you started and how you're progressing. The internal memory can store up to 16 unique user profiles and 130 weigh-ins, and automatically syncs when your phone comes into range.

Is it any good?

The Balance is a bit basic. The setup is seamless and requires minimal faff (plus it's almost half the price of the next cheapest on test), and as a set of connected scales it's more than acceptable, but it lacks the tech to calculate fat percentage, for instance, which makes it more suited to someone weight-watching than anyone into fitness training. The Wellness app offers little in the way of information and motivation, so we'd recommend using one of the compatible apps, such as HealthKit. If you want to start tracking your weight and feel the need for cold hard data, this will do the job with minimal fuss.

Tech specs

Stats tracked Weight, BMI **Battery** 12 months
Display LCD **Connectivity** Bluetooth 4.0
Compatible products iOS

STUFF SAYS ★★☆☆☆

A decent set of bathroom scales that just happen to be Bluetooth-connected

Withings Smart Body Analyzer WS-50

£130 / withings.com

What's the story?

As well as weight, BMI and fat percentage figures, the WS-50 also records your heart rate and monitors your home's temperature and air quality. It's all automatically logged with your online account over Wi-Fi and it can sync with IFTTT. The free Health Mate app (iOS, Android) offers up a wealth of graphs and charts to help you set goals and get results, plus it's compatible with apps like Endomondo and MyFitnessPal. If you exercise more than four times a week you can switch to 'athlete' mode, which adjusts the fat percentage results to reflect your superiority over us corpulent wretches.

Is it any good?

The Withings is stylish, accurate and easy to set up, plus the app serves up motivational messages and targets to keep you stepping on. Resting heart rate is an excellent indicator of cardiovascular fitness, so being able to track changes over time should prove that the sweating is worth it. Assuming you actually do some exercise rather than just talking about it, it should become an invaluable part of your daily routine, whatever your fitness level.

Tech specs

Stats tracked Weight, BMI, fat mass, heart rate, weather, air quality **Battery** 8 months **Display** 128x64 backlit LCD
Connectivity Wi-Fi, Bluetooth **Compatible products** Withings watches, Aura and Blood Pressure Monitor

STUFF SAYS ★★★★★

Beautifully simple but highly effective health kit for the doughy and dynamic alike



BEST FOR
LIFESTYLE JUNKIES



Managing your weight

"The rate and duration of weight loss or gain is crucial information that is often patchy in your medical records and might not have been updated in a long time," says Dr Harkness. "Having this data could be a real help to a doctor if you are concerned about your weight. Weighing yourself once a week would suffice unless your doctor tells you to do it more."



CREATE A DISTRACTION

Exercise is much easier if you can take your mind off it, so raise your morale with one of these tech diversions

Canal beat

Inside the ear is a great place to measure your heart rate – it doesn't move around much when you exercise.



Jabra Sport Pulse

£200 / jabra.co.uk

Whether you're an Eye Of The Tiger type or prefer something a little more up to date, one of the best ways to make you think about anything other than the horrific burning sensation in your legs when you exercise is to pump distracting music into your ears.

That's a job your regular headphones do perfectly adequately every day, but can they also track your heart rate? No, they cannot.

Jabra's wireless Sport Pulse headphones aren't entirely cable-free (there's one between the two buds) but they do also listen to you while you listen to them, tracking your heart rate using Jabra's Sport Life app to make sure you're working as hard as you should. The app can also record your routes using the phone's GPS, calculate how many calories you've burned, and

conduct various basic fitness tests – such as the Rockport Test, which is designed to work out your VO2 max level, and the Orthostatic Heart Rate Test, which helps you ascertain if you're working too hard or are overly stressed. A tap on the outside of the left earbud at any time will give you an update on how you're doing.

Your normal headphones are also prone to falling out while you're running, or falling to bits after continuously being drenched in your highly corrosive ear sweat, but Sport Pulse buds are rugged enough to withstand military-grade punishment from rain, sand, dust and shock, so a little bit of perspiration shouldn't be too much of a problem. There's also a mic included, so providing you're not so out of breath that you struggle to speak, you can even take handsfree calls on the go.



Price crispy

If the Sport Pulses are a bit pricey, Jabra's Sport Pace headphones (£80) also work with the app and are just as tough. They cut a whopping £120 from the asking price, but also cut out the in-ear heart-rate monitoring. Ideal if you already have a watch or strap that takes care of it.



Button move

The left earbud of the Sport Pulses also has handy buttons to control music playback and adjust the volume, so you can turn down that Simply Red playlist before running through any busy streets or crossing any roads. Mick Hucknall has caused enough damage as it is.



Alternatively... FX-Sport VRX

They look a bit lo-fi but FX-Sport has workout guides that can be uploaded to the headphones, or you can race a virtual athlete to really test yourself. **£130 / fx-sport.co.uk**

BEST FOR BEAT-MATCHED MOTIVATION



7 Minute Superhero Workout

They say you should always be yourself, unless you can be Batman, in which case you should be Batman. 7 Minute Superhero Workout will do its best to help, turning exercises into a videogame-esque process of levelling up, using your phone camera to count reps. It supports Google Chromecast and Apple TV, for a big screen experience, but building your underground lair is entirely up to you. **£2.29 (Android, iOS) / superhero workoutgame.com**



Spotify Running

If you run using Spotify's mobile app, its Running mode can use the sensors in your phone to determine your pace and play music to match – and with a bit of help from your listening history it should pick stuff you like. Need a bit of a push to up the pace? Just knock the BPM up a notch and with any luck your legs will follow. There are even some tunes created by superstar DJ Tiesto that automatically change to match your pace as they play. **£10/month / spotify.com**



MyZone MZ-3

Sometimes the best way to get motivated is to introduce a bit of friendly competition – and MyZone wants to tap into that competitive streak. It awards Effort Points to each user based on how hard they work, with a sensor worn in either a chest strap or a sports bra to monitor your heart rate. Each person is given a handicap based on their maximum heart rate, so even if you don't finish first you might still win on effort. And everybody loves a tryer. **£130 / myzone.org**

What's next?

From flights of fancy to VR bike rides

When it's dark outside, the rain is coming down sideways and your trainers are still soggy as a starfish's packed lunch from yesterday's 5K, is it really any wonder that it's hard to find the willpower to drag yourself out of bed for a run?

But what if you could fly to the moon or soar down the Grand Canyon, all with a roof over your head, giving your whole body a decent workout at the same time? That would soften the blow, right?

Icaros (Etba, icaros.net) uses a VR headset and a complicated-looking device that's like a cross between a dentist's chair and some sort of high-tech torture

equipment (some might say they're the same thing). Climb aboard and you'll need to support your bodyweight on your knees and forearms, shifting the contraption about in order to control movement within the game. Take a nosedive and you'll have to take the weight on your shoulder and chest muscles, while turning left and right works your abs and lower back muscles. You can make it set you a course to race around, activate battle mode (which sees you fighting off aliens) or just traverse the skies at your leisure, with a multiplayer mode in the works.

If you'd rather keep your feet on the ground (or at least



a set of pedals), Widerun's VR turbo trainer (Etba, widerun.com) uses your existing bike and teams it with a VR headset to turn the four walls of your home into... well, whatever you fancy. You can purchase worlds to download (from a picturesque autumn woodland

to a *Game Of Thrones*-style wintry wonderland), with your pedalling controlling how quickly you move through it. It can even respond to your steering or make it harder when you're cycling up a virtual hill. Makes a change from the inside of your garage, eh?

BEST FOR
FIVE-A-SIDE



Adidas ACE 16+ TKRZ

£115 / adidas.co.uk



Tom Wiggins, deputy editor

Eric Cantona was just 30 years old when he retired from professional football. I'm 31, so it's probably too late for me to forge a career in top-flight football, but as the face of Kronenbourg 1664 showed by captaining the French beach team after he'd waved goodbye to Old Trafford, there's more to the beautiful game than the Premier League.

My five-a-side career has been patchy at best, but rather than working out exactly what needs to be done I'm going to do a

Real Madrid and just throw loads of money at the problem.

Adidas's ACE 16+ TKRZ are meant for the kind of players who can control the ball as if it's attached to them with fishing line – the ones who take as much joy from *pannas* (nutmegs to those of us whose footballing education took place in the playground) as they do from scoring goals. So not me, then. But that's why these boots have got a special skin and outsole designed to help improve your touch and close control.

And if that doesn't work, I'll just throw some more money at it.

Wahoo Kickr Snap

£650 / wahoofitness.com



Tom Parsons,
online deputy editor
The hardest thing about making fitness-based New Year's resolutions

is that most people will expect me to try to keep them at least for January, which is officially the most miserable month of the year.

So I could write about how I'll get a new bike in an attempt to encourage me to ride to work more, but you and I both know it'd spend more time in the shed than out on the road. Come on, have you seen it out there?

Instead, I'm planning to invest in Wahoo's Kickr Snap, a turbo trainer to slot the back wheel of my existing steed into, so I'll be able to ride in the relative comfort of my spare room. It's an investment and it won't get me to the office, but it is compatible with an app called Zwift, which will run on my MacBook and control the resistance of the back wheel. More importantly, it turns each session into an online bike race against other Zwift users. And unlike real life, I can rage-quit from sprints against them without having a tantrum in the middle of the high street.



Umoro One Shaker Bottle

\$29 / umoro.com



Kyle Pittman,
apprentice web producer
I love playing sport, I really do – but ever since I got my first desk job I've

become far too content spending 90% of my waking hours settled lazily on my posterior. This lack of activity, combined with a metabolism that'd make any supermodel envious, has meant that trying to play tennis at what used to be 'my level' now feels like trying to swat incoming bullets armed with a spatula.

My new gym membership, combined with a fear of an early demise for my fledgling sporting career, means I'm on the lookout for anything to help me get a bit bigger. And the Umoro One is that product.

This stylish-looking liquids container holds a full pint (don't even think about it) as well as 50g of protein, creatine, oats or whatever soluble substance suits you – but that part's in the lid. This means it's all kept separate until the very moment you need it – click the button to release the little mixer, shake and consume. Adonis-like physique, here I come.

Sensoria Fitness Socks

\$200 / sensoriafitness.com



Mark Wilson,
features editor
I thought I'd cracked this running lark. During my time as a bipedal human

I've plodded through several triathlons and Hellrunners with barely a creak. But six months ago my Achilles started flashing up 'error' messages and I was told I needed to re-learn how to run. That's quite a big firmware upgrade for a 35-year-old brain. So I'm turning to these supersocks for help.

My biomechanical bother is that I'm a 'heel-striker'. This subjects my Achilles to a minor earthquake with each stride, so I need to change to a smoother 'mid-foot' landing. How can socks help? The Sensorias contain little pressure sensors that monitor which part of your foot contacts the ground first. They then convert this data into a foot 'heat map' and, thanks to a Bluetooth anklet, send this info to your smartphone for real-time running feedback.

With the app also offering cadence monitoring and a metronome to keep my stride on track, these could be the keys to my new gait. Now I just need to convince my brain it's a good idea.



WALLET

2.0

Too many contactless cards?
Simplify your life – and wallet –
with this wearable payment system

Ever been at the business end of a commuter tut? It's brutal. "Sorry! Sorry! Oh, god..." you bleat, as your cards flutter to the floor from your wallet – right in front of the ticket barrier. The man behind you shakes his head in a mixture of pity and utter disdain; then waves his wrist over the adjacent card-reader and is gone as you scramble on the floor. Your humiliation is complete. Stupid card-clash.

He was you once, you know. He was you before bPay by Barclaycard, anyway. His moment happened in a coffee shop. It wasn't pretty... there was biscotti everywhere. But now, thanks to this ridiculously simple contactless payment system, he breezes through every transaction like he's using The Force.

bPay consists of a chip that goes into a wristband or keyfob, or a sticker that you can plonk on anything you fancy swiping over a card-reader. Load it with money from your debit or credit card (most UK cards are compatible), and it removes the need to fumble in your wallet for quick purchases up to £30. It'll even work in London on buses, trains and the Tube.



Get your bPay at
bpay.co.uk



How it works

1

Register your contactless device

Pair it with the free iOS or Android app and, if you want, set an auto-top-up threshold and amount. You can have up to £200 on the device.

2

Use it to pay for stuff

Swipe or tap the sticker or device on a card-reader and you can make purchases up to £30 wherever you see the contactless symbol.

3

Track your spending

You can see how much is going in and out on the app... and you can transfer money back to your cards if you want.

Payment functionality subject to application and acceptance of T&Cs. Chips valid for a minimum of two years. Once the chip expires you will no longer be able to use your device to make contactless payments.

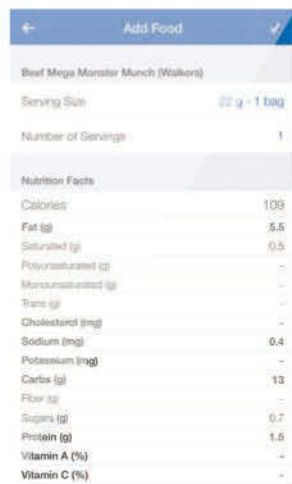
Barclaycard is a trading name of Barclays Bank PLC. Barclays Bank PLC is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority (Financial Services Register number: 122702). Registered in England No. 1026167. Registered Office: 1 Churchill Place, London E14 5HP. Barclays Bank PLC subscribes to the Lending Code which is monitored and enforced by the Lending Standards Board. © 2015 Barclays Bank PLC.

Mini meme



KILLER APPS FOR KILLER ABS

As part of the research for our cover feature, we've been pounding streets, pumping iron and avoiding doughnuts with some help from these six apps



● Calorie Counter

Doing lots of exercise won't work wonders if you relentlessly shove baked goods into your cakehole. With Calorie Counter, you can set a weight goal, track what you're eating, and glare at scary red bars on a nutrition graph having just gorged on fat. Do watch the occasionally iffy food database, though.

Stuff says ★★★★★

Efree /
Android, iOS, Windows Phone



● Runkeeper

It's claimed there are 45 million people now using GPS-based exercise tracker Runkeeper, and so its big advantage is very much that sense of community. As you hike, jog and sprint towards a more svelte you, chances are you can do so in the company of friends. Friends who will secretly hate you when you're hitting every goal.

Stuff says ★★★★★

Efree / Android, iOS

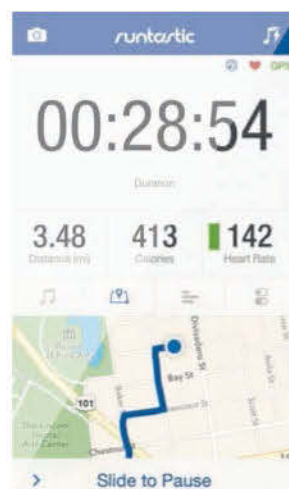


● Carrot Fit

It's hard to go far wrong with seven-minute workout apps. You're ordered to exercise and get fitter. But there is a bit more to Carrot Fit than that: it adds 'or else' to the equation by way of a sadistic AI who'll punish you if you fail. The humour eventually palls, but it's fun performing 'dragon mating dances' and 'kowlows to Cthulhu'.

Stuff says ★★★★★

£2.49 / iOS

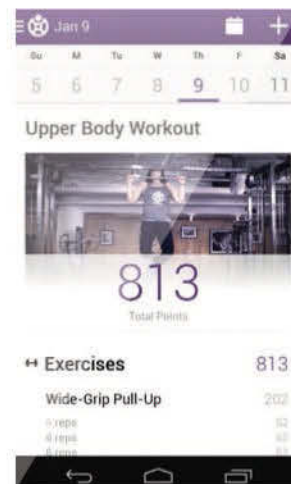


● Runtastic

Much like Runkeeper, Runtastic's all about tracking exercise by way of GPS, peering at graphs, and smugly sharing achievements online. But it has a friendly face – motivational tales you listen to while slogging your guts out. It feels less competitive and a touch more human than its rivals.

Stuff says ★★★★★

from Efree / iOS, Android,
Windows Phone



● Fitocracy

If you're more into workouts and building muscle than hoofing about in trainers, Fitocracy has you covered. Even without spending a penny on IAPs, you get plenty of workout routines and advice. Like Runkeeper, the app's infused with a sense of community, with comments and achievements keeping you on the path to musclebound glory.

Stuff says ★★★★★

Efree / iOS, Android



● Zombies, Run!

With a little help from your vivid imagination, you can transform your attempts to de-lard into a campaign to save the remnants of humanity fleeing the zombie plague. This is *The Jogging Dead*, then, but the novelty gets you moving and entertains while you're huffing and puffing. And the stats-obsessed still get times and distances.

Stuff says ★★★★★

from Efree / iOS, Android

App:roved

FOR
FUNDING
FUN

● Patreon

If you're not aware of Patreon, it's a site that aims to put artistic 'creators' in touch with their fans. This can enable you to crowdfund your favourites, directly paying them to do their stuff in any medium from music to animation. It's taken a surprisingly long time for an app to officially get out there, but the final product does the job nicely: fans can get notifications when creators publish new things and interact with other users, and creators can chat and post updates.

Stuff says ★★★★★
Efree / iOS, Android

FOR
MANAGING
APPS

● Launchify

Apps. They're great, until you've a ton of them installed and can't easily get at them. Launchify attempts to speed up the process, giving you a 'smart' launch bar on your lock screen or notification drawer, or an optional widget. It monitors your app usage and over time gets better at serving you the best apps at any given time of day. Settings exist for hiding specific apps or making them 'sticky', and £1.19 will add an extra row of shortcuts.

Stuff says ★★★★★
Efree / Android

FOR
GETTING
STUMPED

● The Room Three

If anyone's arguing that mobile games lack ambition, point them at this *Myst*-like horror puzzler. You're dumped in a strange building and must escape by solving absurdly intricate puzzles left by the mysterious and presumably deranged Craftsman. Gorgeous and atmospheric, *The Room Three* revels in having you fully explore your surroundings. Tiny details are key to solutions, and often a mysterious lens will suck you into the very conundrum you're trying to solve.

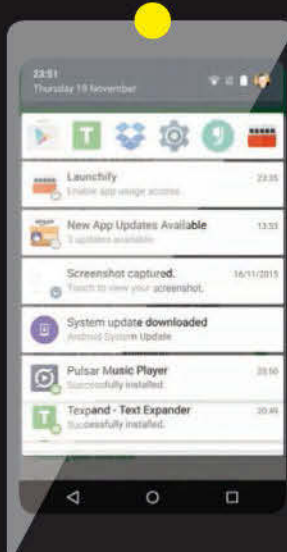
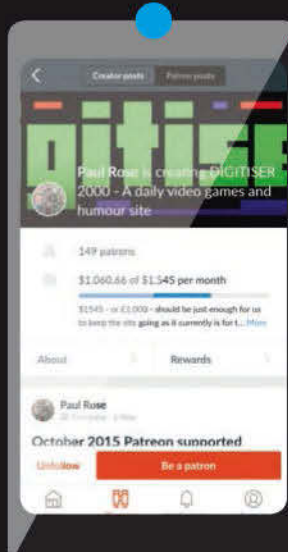
Stuff says ★★★★★
£3.99 / iOS

FOR
LOOPING
LOOPS

● iMaschine 2

This major update to the tiny beat-making 'maschine' finds it blessed with many new toys. You still get pads to bash and keys to play, but now there's step editing for the former, and a superb arpeggiator for the latter. The new arranger also helps you quickly turn loops and scenes into full tracks. A lack of integration with the broader iOS music app ecosystem is a great pity, but otherwise this is a great app for making noises on your iPhone.

Stuff says ★★★★★
£7.99 / iOS





Zeppelin Wireless.
Next level audio
performance.

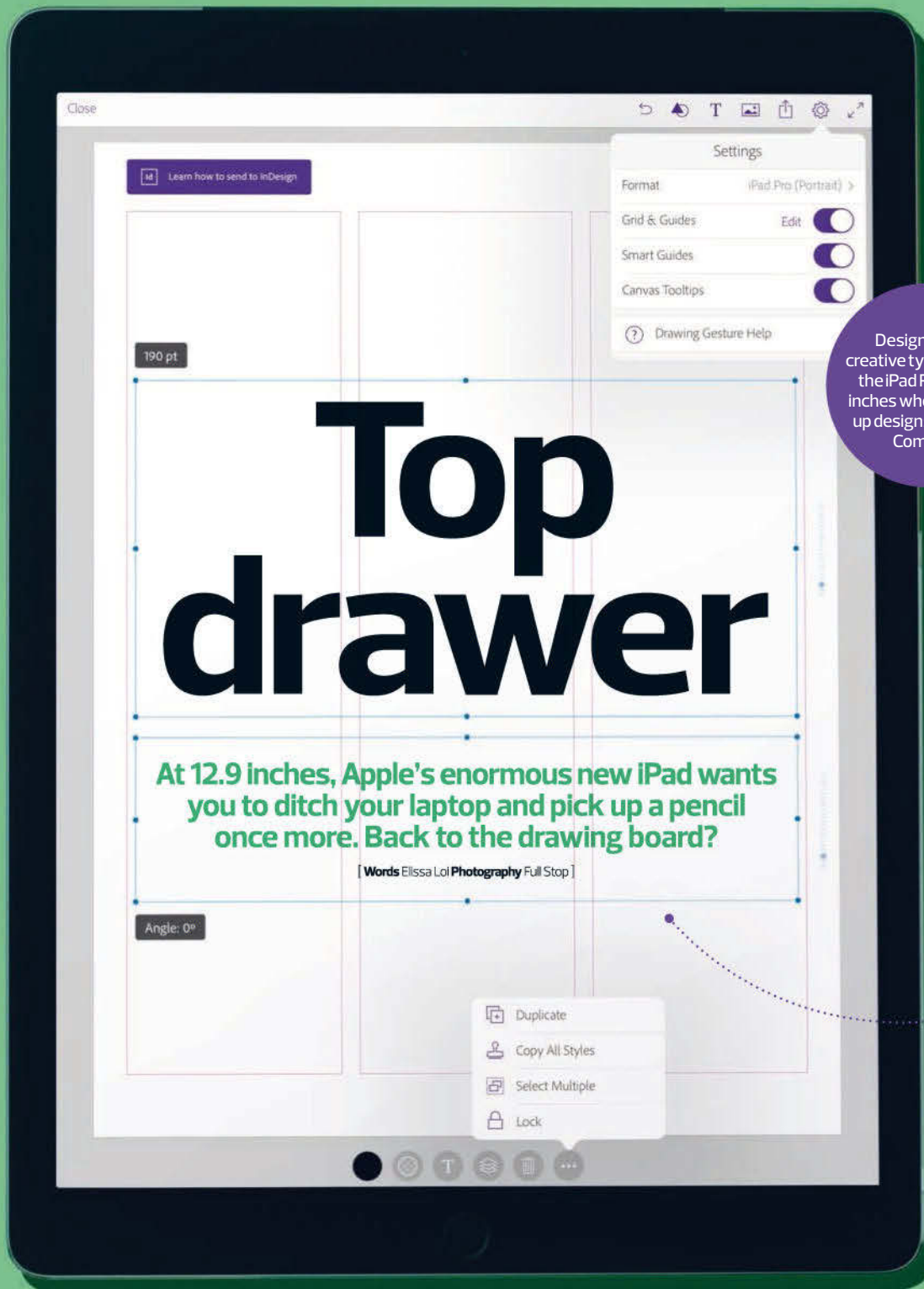
Bowers & Wilkins



THE PEACE AND QUIET YOUR MUSIC DESERVES

Hear no evil. The AKG N60NC headphones feature 30 hours of battery life and deliver Grammy award-winning AKG superior sound while also utilizing best in class active noise cancelling to minimize the disruptive sounds encountered when travelling. Accented with premium materials, this unparalleled listening experience comes magnificently packaged in elegantly crafted lightweight headphones that provide both viewing and listening pleasure.

Find out more at akg.com



Apple has a habit of chuckling at new things, then remaking them. Samsung's Note phablets seemed hilariously big at first, but the iPhone 6 Plus has been hugely popular; Android Wear arrived, and then Apple dropped its Watch. And now, in the wake of Microsoft's surprising success with the Surface, comes the iPad Huge. Like the Surface, this monstertab is here

to get things done, not just doss around with you on Netflix. And it's best used with a keyboard and stylus... sorry, we meant to say 'Pencil'.

Of course, Steve Jobs didn't care much for prodding touchscreens with a glorified twig. "Who wants a stylus?" he famously proclaimed, but that was in 2007. Apple's idea now is that all that Retina real estate

will let designer types shake off their laptops and work on a more portable device... so long as iOS 9's apps are accommodating enough.

Microsoft was smart to invent a tablet that was as work-ready as a laptop. But with millions of people working on MacBook Airs, is the Pro the work tablet the world has been waiting for?



Crowned in sound

However you hold the Pro, it automatically channels the highs and mids to the top two of its four speakers, which makes for better sound in movies and games.

1 Apple Pencil

Apple's Pencil is a handsome, pure white stylus that connects to the iPad Pro via Bluetooth. Just touch the Pencil to the Pro and magical digital ink will flow straight out of its nib. It's almost like writing on paper, if paper came covered in glass and cost £680 per sheet.

As someone who prefers writing over typing, I loved scribbling ideas down on the iPad Pro. It would be great if the native Notes app could convert my handwriting into text, like Livescribe's smartpens do, instead of saving the scrawl as a picture. Still, at least the app is smart enough to differentiate between your palm and the Pencil, so you don't get to give yourself cramp using it awkwardly.

£80 / apple.com

Tech specs

Screen 12.9in 2732x2048 LED-backlit IPS LCD **Processor** Apple A9X 2.26GHz **OS** iOS 9 **RAM** 4GB **Battery** 10,307mAh **Storage** 32/128GB **Camera** 8MP rear, 1.2MP front **Dimensions** 306x221x6.9mm, 713g **Price** from £680 / apple.com

2 Smart Keyboard

If you can only afford to buy one iPad Pro accessory, then go for the Smart Keyboard. Given that Apple's saying this megatablet can replace your MacBook or Windows PC, you're going to need one to be able to type on it, and type properly.

The Smart Keyboard is covered in a smooth, mesh-like fabric that's resistant to water and stains. The keys have a nice give to them, with more depth than you'd expect, and it connects in seconds. Magnets give the keyboard a surprisingly sturdy hold on the iPad Pro, and the triangular fold at the back gives it plenty of stability in your lap. If you're used to a MacBook, the keyboard layout is the same.

£140 / apple.com

Goes large inside and out (fries not included)

At almost 13 inches, the iPad Pro looks like someone ripped a MacBook display off its hinges. It's ginormous when you see it for the first time. Pick it up, though, and you'll find the Pro's light enough, at 713g, to negate any misgivings you might have about its gargantuan proportions. And, aside from the speaker grilles lining each of its four corners, it looks exactly like any other iPad.

Apple is extremely proud of the fact that it's managed to cram 5.6 million pixels into the Pro's screen, giving it a 2732x2048 pixel payoff. So despite the bigger display, you're still getting the blisteringly sharp viewing experience you're used to with iOS devices. That means vibrant colours, deep blacks, and no discernible pixels as far as my eyes could detect.

Despite the tasty display, the Pro doesn't pack in 3D Touch, which is a real shame. Those touchscreen shortcuts are extra handy on the bigger screen of the iPhone 6s Plus, and we reckon Apple would have found even more uses for its haptic tech on the Pro's expanse of glass.

Speed demon

One feature the iPad Pro does have over the iPhone 6s is speed – that's thanks to the seriously fast new 64-bit A9X chip. This processor is so powerful that it can simultaneously render up to three streams of 4K video footage in iMovie, or rotate a 3D model of a skeleton in the 3D4Medical app without so much as a stutter. Impressive stuff.

Even high-performance games like *Geometry Wars* and *Asphalt 8* will flow without a hitch on this tablet. That said, although incredibly immersive, playing a racer feels like driving a super-luxurious bus. Simpler, tap-based titles fare better on this work-centric iPad.

More importantly, the Pro is specced with enough oomph to withstand the



most taxing of multitasking demands, and it won't give up on you at an inopportune moment. Our battery test lasted 14 hours, 18 minutes and 50 seconds, to be exact – a lot more than the 10 hours Apple predicted.

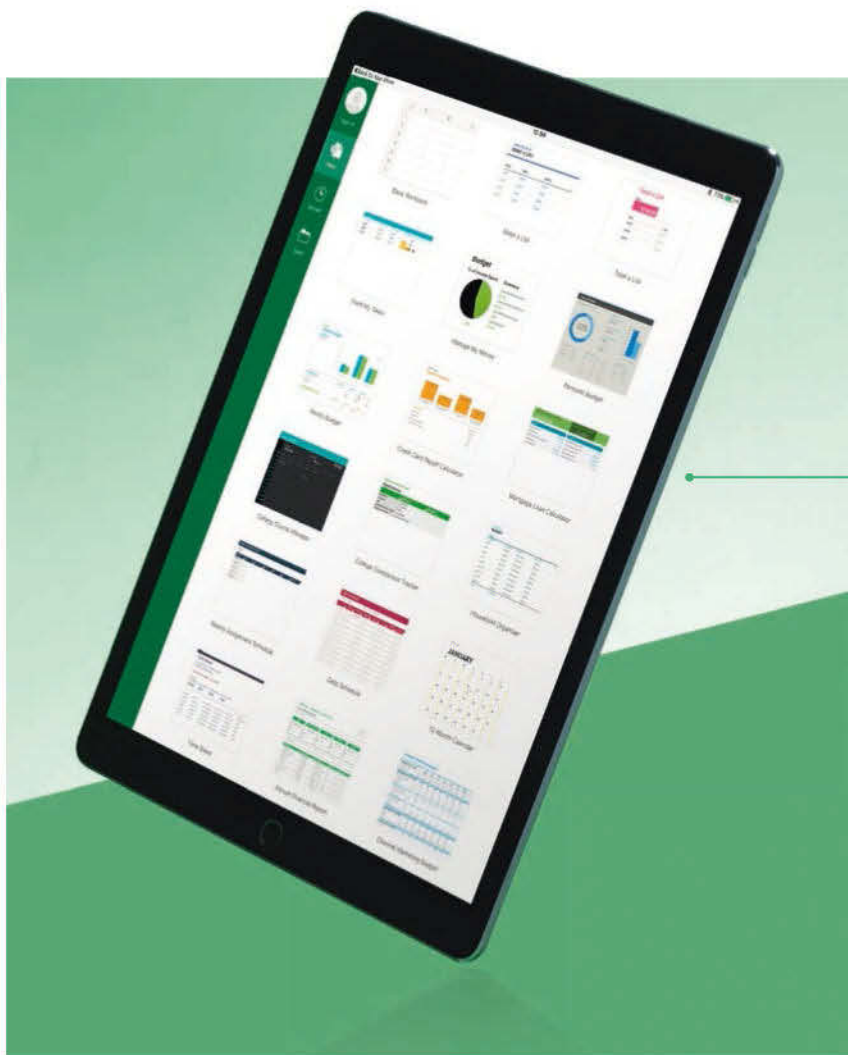
OS-some

Clearly, the elephant in the room when you're talking about Apple's iPad Pro is Microsoft's Surface Pro 4. In the case of this massive tablet face-off, it's more like the C-130 Hercules in the room.

iOS 9 is the main point of difference between the two devices, with Surface Pro hybrids running full-fat Windows 10 while the iPad skimps on El Capitan for its mobile alternative. This means the Pro gives you all the iPad apps you're used to, but they're maxed out in terms of visual experience and the processing heft that's supporting them. At present a lot of developers for the Mac App Store are hesitant to get onboard the iPad Pro bandwagon, so you might not find your favourites available just yet.

At least when they do arrive they'll be well served by iOS 9's Split View mode, which is like having a pair of iPad Minis side by side – except in a way that's actually useful. You can comfortably read emails and look up information without having to zoom in on details. The Picture-in-Picture mode is also great for shrinking videos into a small window while you browse your Facebook feed.





Apple iPad Pro: the verdict

The iPad Pro is not for everyone. If you don't see the value of owning such a large tablet, then its generous curves won't be enough to persuade you to buy one. That's OK – just get the iPad Air 2 instead. It's still our top tablet all-rounder, and the best iPad to slouch on the sofa with.

But if you want to actually make stuff with your slate, then pick up a Pro. It's the perfect digital coffee-table book that just about doubles as a laptop. Sure, it won't actually replace your MacBook Pro or PC, but you'll be surprised at just how much iOS 9 is capable of – particularly when it's combined with a Smart Keyboard and Apple Pencil.

The app-based incarnations of desktop software like Photoshop and Excel are great for bite-sized bursts of productivity, especially when you're on the move or in between meetings. Split View mode also means old favourites

such as Slack and Tweetbot are more useful than ever before.

Sure, you can't get quite as much done on the iPad Pro as you can with a Surface Pro 4, but we found Microsoft's po-faced alternative really struggled as a tablet in testing (that's why it got a two-star review on Stuff.tv and missed out on a Top 10 ranking in this mag). Apple's office-friendly colossus gets its fundamentals spot on, and that's enough to make it the better buy for besuited folk.

So what's holding back the iPad Pro from a perfect rating? More than its borderline exorbitant pricing, it's that lack of 3D Touch and an app ecosystem that hasn't really caught up with what the Pro can offer. At the moment, you just can't make the most of this tablet's immense display.

But for a first crack of the hybrid whip, the Pro makes a tremendous impression.

STUFF SAYS ★★★★★

The supercharged, supersized iPad Pro is for serious creatives with seriously deep pockets

Five of the best apps

Which downloads will make the most of that mammoth screen?

Paper (£free)



More than the sketching app it started out as, Paper has evolved to cater for people who aren't just daydreaming with a stylus in hand. It now offers photo imports, text notes and a diagram pen that tidies up your straight lines and regular shapes. Best of all, it's still free.

Slack (£free)



Any app that helps you spend less time on email is good by us, so that makes Slack an absolute gem. It divides your work-related channels so you can easily send messages, photos and large files with informal ease. Plus, it supports emoji.

Microsoft Excel (£free)



Google's Drive apps aren't bad at all, but Microsoft's own suite of Office downloads trumps them for sheer efficiency. Excel is the pick of the bunch, allowing spreadsheet aficionados to effortlessly switch between PC and tablet usage no matter what OS they hop across.

Procreate (£4.49)



The artistic app of choice for iPads may sound like an expert fertilisation tool, but this effervescent download has Apple Pencil support for 128 brushes and allows you to paint on 16Kx4K canvas – which is a lot, last time we checked.

iMovie (£3.99)



That 4K video we mentioned? You can edit it in iMovie, which is truly impressive for a tablet app. When you consider the extra space the iPad Pro's screen affords for both spotting and tweaking details, budding Bigelows can get filmic wherever they are.

ESSENTIAL II DIGITAL



BRING VINYL TO ANY AUDIO SYSTEM

Combining an award winning design with an unrivalled feature-set, the Essential II Digital turntable aims to bring the joys of vinyl back to any home entertainment system.

By incorporating both a high-grade phono pre-amplifier and an Analogue-to-Digital Converter into the output stage, the Essential II Digital can be easily connected to almost any audio system. Via the RCA outputs you can connect to a LINE or AUX input on your amplifier, while the Digital Optical output means you can connect directly to a DAC, soundbar or AV amplifier.

Available in Gloss Black or Gloss White finish. Supplied with an Ortofon OM 5E cartridge
In-stores and online now for £309.00 (UK SRP)



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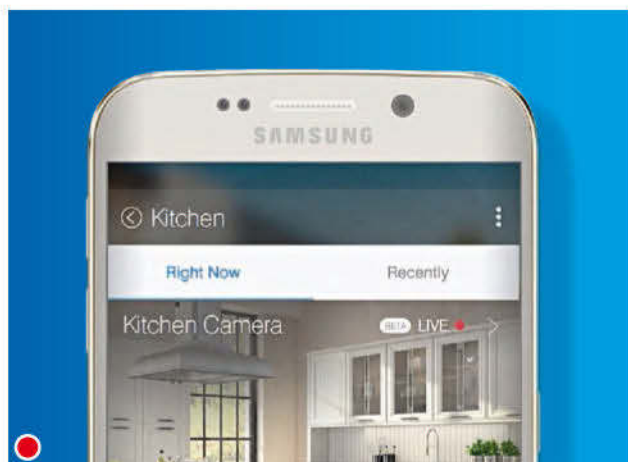
T: +44 (0)1235 511 166 | W: www.henleydesigns.co.uk



Smarter than the average lair

Too lazy to manually turn his own light switches on and off, Will Dunn converts his flat into a smartpartment with Samsung's SmartThings Starter Kit

£200 / smartthings.com



DAY 01

The smarthome revolution is upon us. The giants of the tech world are turning their enormous, fiery eyes towards the peaceful idyll of your home. Armies of sensors are being prepared to occupy your kitchen, your front door and your downstairs loo.

Samsung is the first to throw its mighty hat into the ring, with this 'smarthome in a box' pack, comprising a hub, three sensors and a power switch. Where old-style home automation usually required a certain amount of

thing to wake it up for the first time, at which point the Thing will appear as a new device in the app.

Once you've added a few sensors, you need to decide what you want them to do. This is the first hurdle you hit with SmartThings: trying to figure out what it's actually for.

Fortunately, the SmartThings app is there to help. When you add a sensor it'll suggest one or two SmartApps – actions, such as turning on a lamp when you open a door. Depending on which SmartApp you apply to a sensor,



Old-style home automation usually required some rewiring; the idea of tech like this is that you just plug it in

rewiring, the idea with smarthome tech such as this is that you just plug it in, and it works. With SmartThings only the hub and the smart switch need plugging in – the sensors run on batteries and are controlled by the free app (iOS and Android).

Setup is very straightforward: plug the Hub into the mains and your router, run through a few simple steps and in a few minutes it'll have sorted itself out.

Then it's a matter of adding some sensors. Again, this is a piece of cake: you remove the plastic tab from your chosen

you can then stick that sensor in the desired place using a sticky patch or a screw-on mounting plate.

I added the Multi Sensor to my living room door and the power switch to a plug socket in the corner, then used the Smart Lighting SmartApp to link them, so when I open the living room door, a lamp in the corner turns on. Tweaking the SmartApp's options, I told the app to only do this an hour after sunset and before sunrise. And it works! It works every time, and it's pretty cool. But is it as cool as £200?





What's in the kit

Hub

Plugs into your router, connects sensors and sends commands.

Muti Sensor

Detects if doors, cupboards or windows are open.

Motion Sensor

Does what it says on the tin.

Power Outlet

Switches your lamp on and off.

Presence Sensor

A key fob that lets the hub know if you're at home.



The hub is the size of a small sandwich, so it'll sit unobtrusively next to your router.



DAY 02

The app is nice, but fiddly. It could do with a simple homescreen of on/off buttons. To turn my magic door-controlled lamp off again means picking the Things tab within the Living Room section of the app, before the off button is available. No, that's not a huge effort, but it's competing with the light switch – a piece of technology so simple and intuitive it's basically a reflex action.

DAY 03

Third-party devices are easy to add, and again the app provides the instructions you need. I added the Yale Keyless Connected lock on my front door to the system with little faff. A tap of the in-app button allows me to unlock the door, which I couldn't do before. If someone was coming to stay and they arrived while I was out, I'd be able to let them in from my phone! Sadly no-one's coming to stay, so I have to make do with repeatedly letting myself into my own house. I could also set it to switch on a lamp when I unlock the front door.

DAY 04

The hub sends me a notification to let me know it's been turned off at



the plug. There's backup power, though, thanks to four AA batteries.

DAY 06

The SmartThings system is fairly open. It works with both ZigBee and Z-Wave, so you can add lots of smart switches, built-in sockets and so on. It also works with the cloud-based If This Then That (ifttt.com), which allows you to extend actions to Nest and WeMo products, as well as social media and email. With a bit more fiddling I manage to get SmartThings to turn on my Nest heating at the same time as my lamp. I'm not sure I would want that, though.

DAY 07

While I can't fault SmartThings for how it works, the problem for me is how this kit has been put together. In the box you have three sensors and one plug; three input Things and one output Thing. However excited you are about smarthome tech, £200 is a lot of money for three extra ways to turn a lamp on and off. It would be nice to see some more power switches, but they're an extra £45 each. As such it's not so much a 'smarthome in a box' as a pricey demonstrator kit for people who want to try the tech without doing any rewiring.

STUFF SAYS

SmartThings works well, but this kit is pricey and limited in what it can do

★★★★☆

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We have.
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ACCESSORISE

ALL

AREAS

Make your favourite gadgets even smarter with some of these smart and (mostly) affordable additions

[Photography: Matt Beedle]



APPLE iPhone 6s

from £540 / apple.co.uk

Already acclimatised to your speedy iPhone 6s and its Force Touch-able apps? Take it to new heights with our pick of the best Apple-boosters...

Become an insect-botherer A / OlloClip Macro Pro Lens

It might have Apple's best ever snapper, but there are still many photographic tricks the iPhone 6s isn't capable of. One of those is taking macro shots of tiny critters, who must love seeing the huge rectangular spaceships descend towards their 'bad' side. This set comes with 7x, 14x and 21x macro extenders, the latter of which is powerful enough for a profile pic of a dragonfly's head. £60 / olloclip.com

Boost its audio chops D / Arcam MusicBoost

Audiophiles used to be easy to spot. They were the strange folk with a portable DAC strapped to their iPhones with rubber bands. Now there is a more elegant way to refine an iPhone's sound and power big on-ear cans. The MusicBoost might not be discreet, but it does house a Texas Instruments DAC, an Arcam amp and an external battery that promises to double your playing time. £120 / arcam.co.uk

Take it to heart B / Wahoo Tickr

Heart-rate tracking is the most accurate way to measure your fitness gains. And even more reliable than the optical sensors found in most fitness watches are chest straps like the Tickr. This phone-friendly one has both ANT+ and Bluetooth to ensure it talks to GPS watches, and also RunKeeper, Strava and Nike+. Prefer to pound treadmills? The Tickr Run's accelerometer (£65) will track your indoor runs. £50 / wahoofitness.com

Turn it into a portable studio C / Shure Motiv MV88

The iPhone's mic is fine for a voice memo, but for recording music you'll need the extra sensitivity of an external stereo mic. This condenser model captures 24-bit/48kHz audio, making it ideal for recording interviews, band practice or video audio. It plugs into your Lightning port and has a 90° hinge, which means you can point it towards the audio source while shooting landscape videos for your YouTube channel. £120 / shure.co.uk

Give it smarter power E / MiPow Power Tube 3000

Most external batteries are pretty dumb, overheating your phone and, occasionally, even melting its internal power cells. This 3000mAh pack (enough for one and a half extra charges) gives you peace of mind by monitoring your iPhone's temperature and charge level via its app. The app's Away Alert function can also give you a nudge if you accidentally leave the Power Tube behind. £50 / mipow.com

ALTERNATIVELY

Mikme

Rather not use the Lightning port when recording?

The Mikme is a promising wireless alternative. It captures 24-bit recordings onto its 8GB storage, which can be streamed to your iPhone via Bluetooth. £265 / mikme.com



NOW DO THIS...

MAKE YOUR OWN APPS

1 / Get with the flow

No need to jailbreak your iPhone to set up some automation. The Workflow app (£3, iOS) lets you string together actions from different apps, and connect more than two actions.

2 / One-tap Uber

One of Workflow's gallery apps, Uber Home, lets you call a taxi with one tap. To make it an app shortcut, press the arrow icon at the top left and choose 'add to home screen'.

3 / Power album

We all have days when only Carly Rae will get us through. To set up a homescreen shortcut to your favourite album, make a button using 'find music' and add it to your homescreen.

4 / Workflow widget

Can't find that washing machine timer shortcut? Add Workflow to your Notification Center. Drag your finger down from the top of the screen, then add Workflow to your 'today' section.



C

A



B



D



E



Finishing touches



Retro Apple logo decal
Buy from 'UnitedKingdomofDecal' on Etsy and paste over the logo.
£3.40 / [etsy.com](https://www.etsy.com)



Leef iAccess
A handy way to add a microSD and quick access to your snaps.
US\$50 / [leefco.com](https://www.leefco.com)



A

E

D

Finishing touches



Jaws Flex Clamp

This mount quickly clamps to objects from 0.6cm to 5cm thick.
£40 / gopro.com



TurnsPro

Set direction and speed to add a new dimension to your timelapse.
£70 / turnspro.com



GOPRO HERO4 BLACK

£410 / gopro.com

GoPro's flagship is at the summit of Mount Actioncam, thanks to its 4K video and compact form. But that doesn't mean it can't be improved with a few brilliant add-ons...

Make it last all day A / Powervault

You'll always need more power than you think. The Powervault case takes care of this thanks to its built-in charger for GoPro Hero3+/3+ and Hero4 batteries. You can charge them two at a time and its 5200mAh reserve is good for five full top-ups. The case itself is made from water-resistant ballistic nylon to protect your GoPro, accessories and batteries, and it has an extra USB port for charging other devices. **US\$100 / polarprofilers.com**

Keep it on the level D / Feiyu FY-G4

Nothing says pro video quite like silky smooth moving shots. While just a few years ago you'd have needed a huge vest with an arm, springs and weights, thanks to the magic of electronic gimbals you can now get it all in a stick and pop your GoPro on the end. The 3-axis FY-G4 has three stabilisation modes to help you make some next-level moves. It can even use its own battery to provide power to the GoPro itself. **£210 / firstpersonview.co.uk**

Give it night vision B / Knog Qudos

Even though the Hero 4 Black's low light performance is the envy of other action cams, there's no substitute for shining more light on the subject. The Qudos's three XB-D Cree LEDs pump out up to 400 lumens of bright white light and the 1000mAh battery can be recharged via USB. It comes with an adaptor for fitting side by side with your GoPro on whatever mount you're using, and it's even waterproof down to 40m. **£60 / wiggles.co.uk**

Set it free E / Removu R1

The Hero4 Black doesn't come with an LCD screen. You could use the GoPro's app, but hitting record on the move without sending your phone down a ravine isn't easy. The Removu R1 acts as a remote viewer, offering live view on your wrist with playback and access to settings on its 2in, 320x240 LCD for up to three hours and at up to 70m away. Splashproof and shockproof, it's also pretty tough. **£80 / oceanleisurecameras.com**

Hone its hearing C / Rode VideoMic Go

While it may be tempting to just lay music over all your videos, recording some high-quality audio can help tell a story. Rode's VideoMic series are widely used by filmmakers and the battery-less VideoMic Go will help focus on speech or action, while its shock mount combats vibration noise. It connects to the GoPro's miniUSB port via the 3.5mm mic adaptor (£20, gopro.com) and there's lots of mounting options. **£55 / gear4music.com**

ALTERNATIVELY

Slick

This 3-axis electronic gimbal is designed to be mounted wherever you'd normally mount a GoPro. Waterproof to 1m and more compact than the F-G4, it's available to pre-order if you don't mind waiting until May. **US\$260 / slick.video**



NOW DO THIS...

SHOOT YOUR FIRST VIDEO TIMELAPSE

1 / Pick your scene

You'll need a decent amount of movement to keep it interesting. City scenes with busy roads are a good place to start, with bridges and overpasses providing perspective.

2 / Get steady

You'll need a firm base for your GoPro. You could set up a static shot with the Jaws Flex Clamp (see left) or, to really impress, add some movement using the TurnsPro.

3 / Pick your lapse

Select 'T Lapse' in video mode, then choose your interval. The slower the movement, the longer the interval: busy streets need 1-2 secs, clouds need 5-10 secs.

4 / Go advanced

Now you can move on to photo timelapses (producing separate images, not a video file) to capture more detail; these will need finishing in the free GoPro Studio software.



CANON EOS 750D

£540 / canon.co.uk

With its winning blend of user-friendliness and stellar performance, this people's champion of a DSLR is the perfect entry-level snapper. Here's how to make it even better...

Light up the dark

A / Canon Speedlite 270EX II Flash

That 50mm lens (C) will help in low light, and the 750D has a pop-up flash for emergencies, but for good pictures in murky conditions you can't beat a proper flash. It's perfect when you're snapping your friends at a party (tip: point it at the ceiling to 'bounce' the light for a more natural look), and it functions off-camera so you can light subjects from any angle – even from behind.

£150 / canon.co.uk

Keep it close

B / Joby UltraFit Sling Strap

If you're aiming to become a shark-eyed street photographer, snapping your subjects before they've caught a sniff of you circling, this extendable shoulder strap will improve your reaction times. When worn over your shoulder it'll keep a camera close to your body and prevent it from swinging wildly. But pull it forward in an upward arc and it'll instantly extend to shooting length.

£35 / johnlewis.com

Make the skies beautiful

B / Tiffen 58mm Circular Polarising Filter

You can apply all manner of Instagram-style filter effects to your digital photos, but one filter that can't be replicated by software is the venerable circular polariser. Screw it onto the front of a lens, give it a twist and you'll see reflections on leaves, grass and water fade away, details on clouds gain definition and blue skies get richer. A must for any budding landscape photographer.

£32 / amazon.co.uk

Be a sharper shooter

C / Canon EF 50mm f/1.8 STM Lens

The 750D's kit zoom is fine for basic outdoor photography, but not so good when the sun starts to dip or you head indoors. That's where the bright f/1.8 aperture of this 50mm lens comes into its own, sucking in tons of available light without requiring long shutter speeds. The result is stiletto-sharp images in almost any conditions – with gorgeous blurred-out backgrounds.

£100 / canon.co.uk

ALTERNATIVELY

Manfrotto 290

Far less bulky than a tripod (only 540g), this single stick monopod will still provide a measure of much-needed stability without becoming a burden on long photo hikes. Bonus: it doubles as a walking stick.

£50 / manfrotto.co.uk



NOW DO THIS...

BECOME A PORTRAIT PRO

1 / Get set

Recruit a willing model (or bribe an unwilling one). Fit that 50mm lens. Now set the 750D's mode dial to aperture priority – you'll need to keep the 'f' setting low. Because...

2 / Focus and blur

You want to get your subject's face in sharp focus while keeping the background out of focus. The lower the f-stop, the narrower the part of the image that stays in focus.

3 / Go for the eyes

Portraits like this work well when the subject's eyes are in focus, so train the focus point on the peepers. Check and see how much of the face is sharp. Too little? Push the f-number up.

4 / See the light

Try lighting the shot differently with an external flashgun. Put it below or to the side of the subject to add drama – or even behind them to get an eerie silhouette.



C



D



E



Finishing touches



SanDisk Extreme 16GB SDHC card
16GB is more than enough storage for thousands of JPEG images.
[ET1 / amazon.co.uk](#)



Canon RC-D6 remote control
This cheap infrared remote is a must for elaborate selfies.
[£13.50 / amazon.co.uk](#)



Finishing touches



Anker PowerCore+ Mini
If you're going bag-free, pocket this emergency backup.
£16 / ianker.com



MiPow Playbulb Garden
This water-resistant outdoor LED can change colour via its app.
£30 / mobilefun.co.uk



SAMSUNG GALAXY S6

from £480 / samsung.com

It might be *Stuff's* number one smartphone, but that doesn't mean you can't take the S6 to places its octa-core processor has only dreamed of...

Give it telescopic vision A / 12x Zoom Telescope Case

A truly bonkers way to upgrade the S6's camera, this 12x optical zoom lens lets you take long-distance garden shots pretending to be a giant with a tiny telescope. Try to get the same effect with digital zoom and you'd end up with a blurry smudge. As super-extended zooms need to be kept extra still, it also comes with a little tripod that folds into the kit's hard-backed case. £40 / mobilefun.co.uk

Turn it into a portable telly D / Celluon PicoPro

We've seen pico projectors before, but none that are quite as good a match for today's slim-waisted smartphones as this wireless, laser HD model. Despite being half an inch thick, the PicoPro can comfortably blast a watchable 50in picture onto a wall in a darkened room to show off your cat videos. It also connects wirelessly to Android devices via Miracast and has a two-hour battery life. £240 / celluon.com

Wrap it in smart armour B / S View Cover Case

It might not be bulletproof or made from laser-cut bamboo, but this official Samsung case is still our favourite for the S6. Close the front cover and the phone switches into S-View mode, letting you answer calls, reply to messages and take snaps without opening the case. It's also Qi-compatible, so you can use it with your Captain America charger (below) too. £29 / clove.co.uk

Shield it from tangles E / Avengers Qi Wireless Charger

Wireless charging might still be a distant dream for iPhone fans, but Qi pads for Android phones have already moved on to the 'novelty coaster' phase. This Captain America-themed number is more charming than your average black circle, and has rubber sections on the top and bottom to keep your S6 in place. It's not as fast as a wall charger, but infinitely more convenient. £40 / mobilefun.co.uk

Give it an energy shot C / OnePlus Power Bank

Vying for the title of best-value accessory, this 10,000mAh battery will charge your S6 four times over for the price of a pub lunch. The 16mm-thick Power Bank is slim enough to slip into a coat pocket, and its minimalist design means your S6 probably won't notice it's made by rival OnePlus. Two USB ports mean you can charge two devices simultaneously. £14 / oneplus.net

ALTERNATIVELY

Ikea Varv table lamp

If it's been subtly suggested by your significant other that *Avengers* doesn't quite suit the overall look of the bedroom, this lamp will deliver the satisfaction of secret wireless charging instead. £50 / ikea.com



NOW DO THIS...

SHARPEN YOUR S6 SNAPS

1 / Become a composer

Go to the S6's camera settings and enable the grid overlay. Get your main subject about a third of the way into the frame for more interesting photos.

2 / Beat low light

The S6's 'Pro mode' lets you adjust manual settings. For more dingy scenes, attach your smartphone to a mini tripod then set the exposure to last five seconds.

3 / Go macro

To shoot the small stuff, go to 'Pro mode' in manual focus and use the vertical slider to go through the AF range and get your subject in focus. Way better than autofocus.

4 / Lock the focus

Sometimes you need the camera to stay focused on a subject as you move (perhaps away from a bear). Just hold your finger on the screen until the blue focus circle appears.



DJI PHANTOM 3 ADVANCED

£900 / store.dji.com

This ready-to-fly drone comes with semi-pro filming capabilities thanks to its gimbal-stabilised 1080p camera, but you can make it even more of a dream to fly...

Give it a ticket to ride

A / Lowepro DroneGuard CS 400

The first time you try to pack your drone back into its box you'll realise that it just isn't going to work – how do they fit it in there? This rucksack case, made from a sturdy but lightweight FormShell composite protective outer, will provide a much better home for your quadcopter. Its dividers make the perfect fit for your Phantom, plus there's space for batteries, controller and a tablet. £110 / lowepro.co.uk

Unleash its video

D / DJI HDMI Output Module

This little module screws into the back of the standard controller, giving it a live mini HDMI output. It's great for either sharing your Phantom's camera view in 720p or getting a closer look using a dedicated monitor or some FPV goggles (see right). You can also choose to output picture only, or with all the on-screen overlays. There are also microUSB, USB and CAN expansion ports. £80 / store.dji.com

Pack some spare arms

B / DJI Carbon Fibre 9450 Propellers

It's always a good idea to have a set of spare propellers to hand when out flying, as they're the first things to break in the event of 'pilot error'. These replacement props not only look meaner than the stock units in stealthy black, but should be stiffer as they're reinforced with carbon fibre. This should provide a faster response and an improvement in efficiency. £12 / hobbymounts.co.uk

Give it sunglasses

C / Polar Pro Filter Set

This set of three filters will add the professional touch to your aerial vids. Replacing the stock UV filter, they screw directly onto the camera and add less than 2g in weight. The pack consists of a circular polariser to bring out the deep blues in the sky and limit reflections off water, plus neutral density (ND4 and ND8) filters that cut down the amount of light hitting the sensor to limit lens flare and rolling shutter issues. £50 / hobbymounts.co.uk

See through its eyes

E / HeadPlay FPV Video Goggles

Taking your first steps towards FPV drone racing? These goggles have a 720p screen, which is fed video by the Phantom controller's HDMI. Though not exactly subtle, their lightweight polystyrene build means you won't put a kink in your neck, while their 70° field of vision lets you see what's up ahead so you can avoid hurling into the nearest community-planted oak. £245 / firstpersonview.co.uk

ALTERNATIVELY

FatShark Dominator V3

These goggles are compatible with DJI drones via HDMI as well as a number of other FPV setups. Their WVGA picture has a 32° field of view and there's even a built-in anti-fog fan. £300 / firstpersonview.co.uk



NOW DO THIS...

USE WAYPOINTS TO CAPTURE CINEMATIC SHOTS

1 / Enable Multiple Flight Mode

Tap the drone symbol in the DJI app to open the Main Controller (MC) settings, then select 'Advanced Settings' and switch on 'Multiple Flight Mode'.

2 / Switch from P to F mode

Toggle the mode switch on the left shoulder of the controller from P (Positioning) to F (Function). Up should pop the Intelligent Navigation menu.

3 / Go on a mission

Select 'Waypoint', then 'New Mission'. Now fly, tapping Record (C1) to record the Phantom 3's current position as a waypoint. You can delete the last point by tapping Delete (C2).

4 / Bust a move

Select 'Consistent to record' under 'Heading' to make the Phantom 3 repeat the course as smoothly as possible. Apply settings and they will upload to the drone for automatic re-flying.



C

Finishing touches



96 Flight-Critical Stickers

Even the most experienced pilots benefit from well-labelled controls. [US\\$30 / uavstickers.com](#)



DJI Monitor Hood For Tablets

This hood cuts down the glare for more squint-free flying practice. [£16 / evp.com](#)

E

D

C's all that

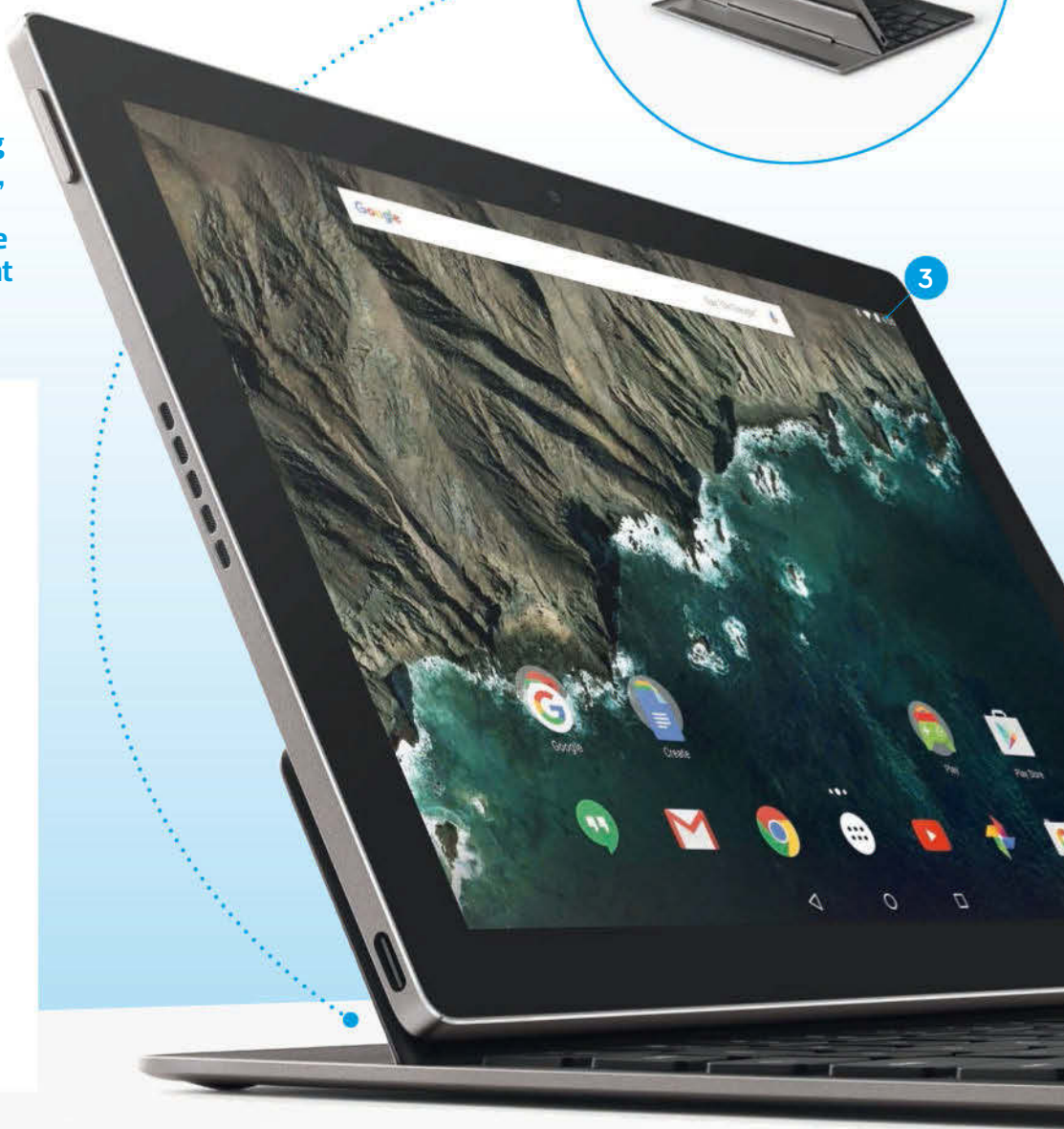
If the iPad Pro's too big and expensive for you, Google's new work-friendly tablet could be the laptop replacement you're looking for

from £400 (keyboard £120)
/ pixel.google.com

It's an era of unexpected gadget firsts. In October, Microsoft announced that it was making its first laptop (the Surface Book), which sounds unlikely, but it's true. In the same vein, let us introduce Google's first tablet.

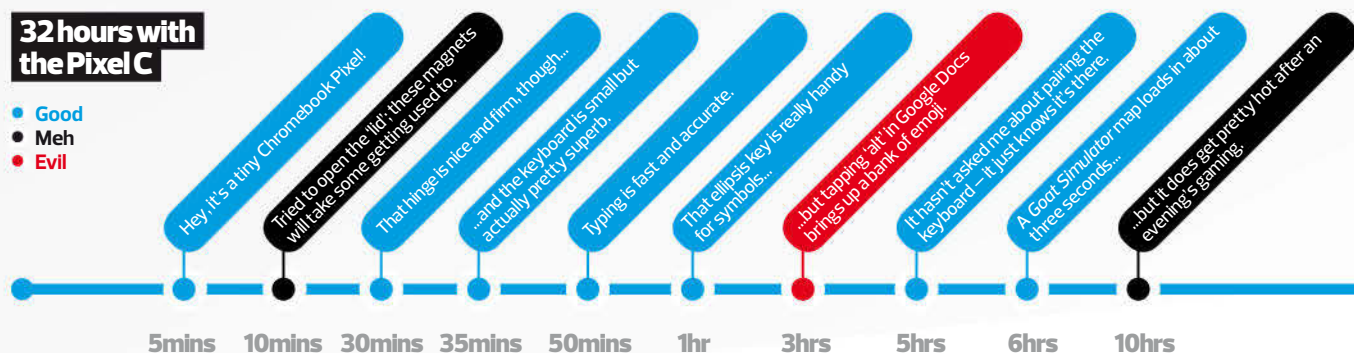
Yes, Google has sold a lot of Nexus tablets, but Nexus devices are always made by others like LG or Asus or Huawei. Only Pixel kit is actually made by Google, and this is the first Pixel tablet: a 10-inch slate that looks just like an iPad Air, but comes with a nifty keyboard that snicks on with strong magnets.

It looks a lot like its big brother, the Chromebook Pixel. It's very compact, to the extent that we briefly carried it tucked inside the dust jacket of a hardback book. To put it into laptop mode you pull the tablet and keyboard apart, flip the tablet over and let the magnets click it into position. The hinge can then be rotated to hold the screen upright.



32 hours with the Pixel C

- Good
- Meh
- Evil



1 Small wonder

The hinge is firm and the magnet on the back is strong, so despite its small size, the Pixel C feels solid. It rests comfortably on your knees for typing, and because the footprint is so small it fits easily onto one of the tiny little tables on the backs of plane and train seats.

3 The display's the thing

The 2560x1800 display is sharper and brighter than the iPad Air 2, cramming in over 300 pixels per inch (the 13in MacBook Pro Retina has 227ppi). You'll be horrified the first time you go to delete some emails and leave a smear of biscuit chocolate across the middle.

2 Just my type

The keyboard is great: the keys are a good size, and they have a proper 1.4mm of travel. It's quick and easy to type on. Shortcuts like alt-tab do what you expect them to do. An ellipsis key next to the space bar brings up symbols, just like on a phone keyboard.

4 Batt to the future

In our video rundown test, the Pixel C averaged around 10 hours of watching movies or browsing. You could comfortably expect to get at least one working day (a long one, with train journeys) of use out of the Pixel C, without needing to use its USB-C charger.

5 You've been working out

Everything we run on the Pixel C runs smoothly, and it should: this is some of the most powerful Android hardware we've used so far. In fact it has the same space as Nvidia's 4K-capable Shield Console, pairing the new Tegra X1 chip with 3GB RAM.

Techspecs

Screen 10.2in LCD, 2560x1800

Processor Nvidia Tegra X1 64-bit

OS Android 6.0 Marshmallow **RAM** 3GB

Camera 8MP rear, 2MP front

Battery life 10 hours **Storage** 32/64GB

Dimensions 242x179x12.5mm, 916g (with keyboard)

Swipe then type

Has Google crafted the perfect blend of premium performance with portable flexibility? We find out...

**■ Work**

This machine is absolutely tailor-made for Gmail and Google Docs, and it excels at them. With 32 or 64GB the lack of a microSD slot isn't a crime, but the option to use a separate data SIM would be nice.

**■ Play**

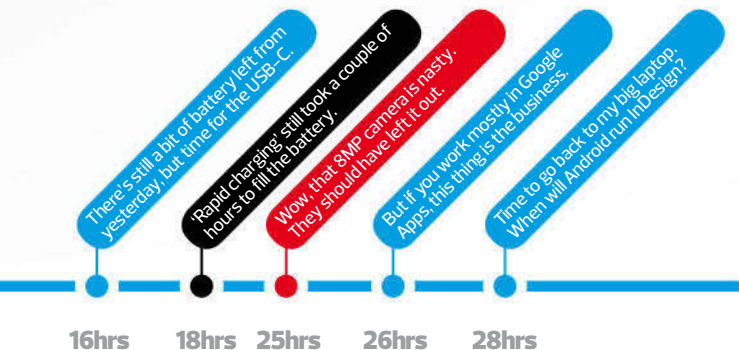
That new Tegra X1 chip races through everything Android can throw at it: *Goat Simulator* loads in seconds, and runs without the slightest lag. You could even play *Half-Life 2* on it using the TegraZone app.

**■ Mucking about**

If you're keen to draw with a stylus then you're better off with the Apple iPad Pro and its magical Pencil. The Pixel C will excel at the creative apps Android has to offer, which include Adobe Lightroom.

**■ Oh, snap**

Oh yeah, and it has two cameras. The 8MP one on the back is poor, but who takes photos with a tablet? More important is the 2MP HD video camera on the front, which works great for Hangouts and Skype.



The Pixel C is our new favourite tabtop. It's very nicely made and excellent for working on the go, with a great keyboard and a 10-hour battery life. And once you've finished earning your crust, it has a superb screen for movies and powerful specs that'll handle the most demanding Android games with ease. @willydunn

STUFF SAYS ★★★★★

The new era of laptop-replacing work tablets is here, and the Pixel C is the best of the bunch

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Fight of the non-cords

B&W Zeppelin Wireless

B&W sticks with the familiar airship design of the Zeppelin Air – well, they couldn't well change the shape and keep the name, could they? Even slicker than its predecessors, this is up there with the best speakers to look at. And hug.

The improved app gets iPhone users streaming-ready in no time (Android fans will need a PC or Mac). Touch controls neatly handle Bluetooth connectivity, with AirPlay and Spotify Connect also backing its cord-cutting efforts.

Five new drivers help make this Zeppelin one of the best-sounding one-box units we've heard. It's phenomenal – as squeaky clean and transparent as a just washed window, even with the volume pushed to 11.

Ports Ethernet, 3.5mm, USB (service only)
Formats supported FLAC, WAV, AAC, MP3
Dimensions 660x188x183mm
Weight 6.5kg
Colour Black

● **Price** £500 / bowers-wilkins.co.uk

vs

Sonos Play:5

The Play:5 is less elegant than the other Sonos speakers and more of a lunchbox, but it does look more modern. The size allows more volume and depth, and it can lie sideways or sit upright: a swivelling badge stops it looking topsy-turvy.

Sonos strikes back as the master of multiroom. The iOS app holds your hand while you add streaming services, and the room-responsive Trueplay software involves waving your phone about like a wizard testing a new wand.

Ready to break into Kanye West's *Stronger*? Bigger, bolder, better, clearer than its predecessor, it throws out a sound much bigger than its size lets on, and the bass plunges deep... but it can't quite match the B&W for out-and-out expression.

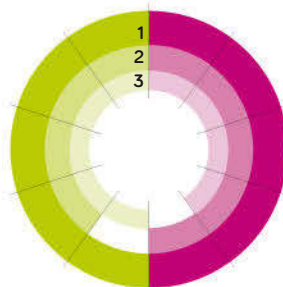
Ports Ethernet, 3.5mm
Formats supported MP3, WMA, AAC, Apple Lossless, FLAC, WAV, AIFF
Dimensions 364x203x154mm
Weight 6.36kg
Colours Black, white

● **Price** £430 / sonos.com

1. DESIGN

2. USABILITY

3. SOUND



★★★★★

STUFF SAYS

★★★★★

Unless multiroom is a must, the Zeppelin just about wins for its phenomenal sound

Shining X-sample

It's only £200, but this affordable Android from OnePlus is still surprisingly flashy

from £200 / oneplus.net/uk

■ OnePlus is a cheeky company. With the OnePlus One and 2, it boasted that it had trampled all over much more expensive alternatives such as the Samsung Galaxy S6. The OnePlus X limbos even lower, costing just £200. It's the most impressive phone you can get in that price range.

■ Until now, OnePlus's phones have been mostly plastic things. The X's rear is glass like the Sony Xperia Z5, and its sides are metal. It feels surprisingly luxurious.

■ It also has an AMOLED screen, whereas the other OnePlus phones use LCD displays. What this style allows is superb contrast: no matter the lighting, black areas stay pitch dark.

■ The OnePlus X's software is the same as the OnePlus 2's: Android 5.1 with the customisable Oxygen UI. There's plenty to tweak, from the colours of the apps menu to turning off the hardware keys and using on-screen software keys.

■ The Snapdragon 801 chip was used in the HTC One M8 and the OnePlus One, and in the OnePlus X, paired with a generous 3GB of RAM, it offers plenty of power. About 18 months ago, this kind of specification set would have cost you £500 or more.

Tech specs

Screen 5in AMOLED 1080x1920
Processor 2.3GHz Snapdragon 801
OS OxygenOS based on Android 5.1.1
Battery 2525mAh **Storage** 16GB (expandable up to 128GB) **RAM** 3GB
Cameras 13MP rear, 8MP front
Dimensions 140x69x6.9mm
Weight 138g



Nice but dim

A 13MP camera and 8MP selfiecam sound good on paper, but they lack the image stabilisation and laser focusing of the OnePlus 2. This is a good camera but it can't compete with the best in low light.



Shelfie mode

The one slightly more ambitious change is something called Shelf. This is an extra homescreen that's home to a few widgets, showing the weather plus your favourite contacts and apps.

STUFF SAYS The OnePlus X sets a new standard among £200 mobiles ★★★★★

Not perfect, but still bloomin' good value

Andrew Williams



No-one else seems able to match the price aggression of OnePlus. The X is a bargain blower for people who don't like the feel of the OnePlus 2, or are after something a bit smaller. Its design is lovely, with no sign that this is a 'cheap' phone – it's a delight to use. The only issue is that the OnePlus 2 only costs £40 more and has a more versatile camera and, for screen snobs, more relaxed-looking colours.

Imperfect circle

Pebble's slim, stylish smartwatch is aimed at women and their slim, stylish wrists. But is its battery so last season?

from £230 / pebble.com



The lovely sleek body of the Pebble Round comes at the price of less room for lovely big batteries.

■ We're no scientists, but we'd estimate that the Time Round watch is 90% bezel. The actual screen is roughly the size of a 10p piece and the total watch face is a bit bigger than a £2 coin.

■ Despite this, the Time Round is more stylish and lighter than most smartwatches... especially when you compare it to particularly chunky models such as the Huawei Watch and LG Watch Urbane.

■ Other than its ginormous bezel, the big issue with the Pebble Time Round is that it slashes traditional Pebble battery life. While the bigger, uglier Pebbles can last up to 10 days on a single charge, this one only manages about 48 hours.

■ As usual there's a button-based setup for navigating around this Pebble, which you can use to scroll through its timeline-style menu. This is fine as long as you don't download too many apps, because you'll have to schlep through them all to get anywhere.

■ Getting the backlight to kick in requires a pretty serious flick of the wrist, so slyly checking your messages mid-meeting requires a bit of forward planning.

■ The Pebble 'ecosystem' remains slight. Every app seems to come with caveats – using maps is like trying to look at an A-to-Z from three miles away and all the bus time apps seem to be US only.



■ Select your style

The Time Round's strap comes in six styles and there's a slimmer 14mm strap for small wrists. It's hard to say how sturdy the Time Round is after only a week or so of use, but we're not sure you should wear it to bed.



■ Wristy fitness

Although you can exercise with the Time Round, it's not really an activity tracker. There's a Misfit app that tracks your steps and sleep patterns, but it doesn't take fitness as seriously as the Apple Watch or a dedicated band.

Techspecs

Display 1in colour e-paper, 180x180 pixels **Weight** 28g
Dimensions 38.5x38.5x7.5mm
Band size 14/20mm **Sensors** Accelerometer, compass, mic

STUFF SAYS The Time Round looks the part... it just doesn't do all that much ★★★☆☆

It's a watch alright, but they forgot to put the smarts in
Kate Solomon



As smartwatches go, the Time Round is easy to use, looks quite nice and doesn't bother me when I don't want it to. If what you're after from a £230 smartwatch is the odd notification and something you're not ashamed to be seen in, then it's a good option. But for all its bells and whistles, this Pebble's number one skill seems to be timekeeping. A watch that tells the time. In 2016. Who'd have thought it?

It's the Siri season

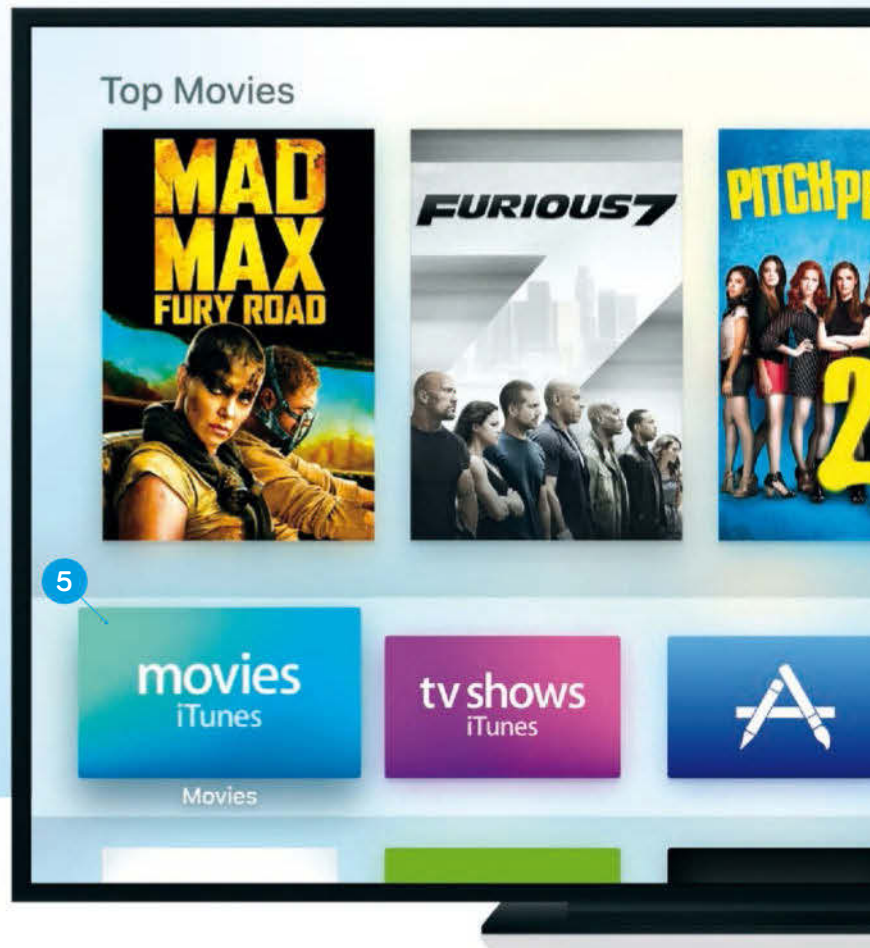
The new Apple TV may look familiar, but can apps and a listening remote control make it the future of TV?

from £130 / apple.co.uk

For years, certain pundits remained convinced an Apple telly was just around the corner. Instead, Cupertino's most famous company only made dinky streaming boxes it referred to as merely a 'hobby'. And although former CEO Steve Jobs said in Walter Isaacson's 2011 biography that he'd "cracked" television, rivals in subsequent years blazed past Apple's stubbornly unchanging kit.

With this 2015 release, we still don't get an actual telly, but Apple TV is definitely no longer just a hobby. Instead, it's far closer in nature to a headless iPhone: it's a powerful streaming device that builds on what went before by finally introducing an App Store as well as building in Siri voice smarts.

On stage in September 2015, Tim Cook enthused that this fourth generation of Apple TV would be the future of television; but has Apple done enough to compete in the present?



1 What the puck?

Like its predecessor, the new Apple TV is a small black puck. It has the same A8 chip you'll find in the iPhone 6, and 2GB of RAM. That's enough oomph to make it suitably nippy – it'll cope with 1080p HD, but not 4K... which you'll find in Amazon's Fire TV.

2 You're so remote

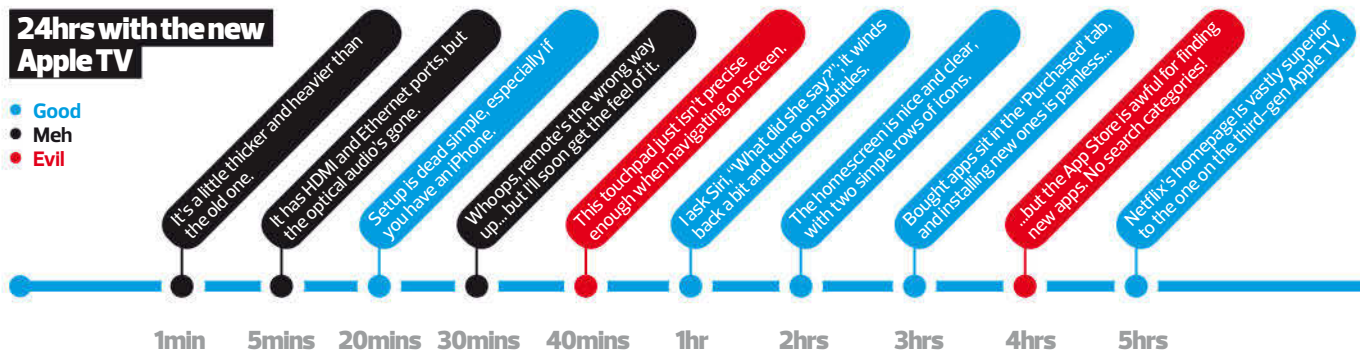
The new Siri Remote has smarts. It has Bluetooth, six buttons, a built-in mic, a glass touchpad and a Lightning port for charging. Still, it's easy to find the remote the wrong way up and the touchpad doesn't afford enough precision when navigating on screen.

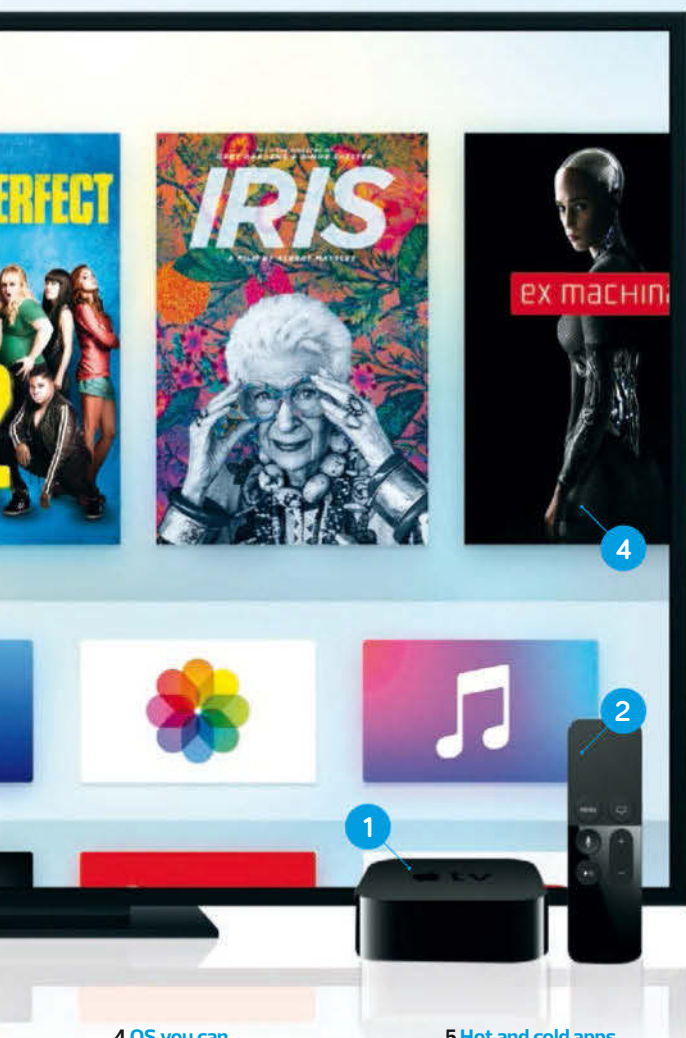
3 Ask me anything

The Siri Remote is far better when it comes to the 'Siri' bit. Enquire about genres or famous stars and it will quickly return selections of films or shows. In the future, when 'universal search' rolls out, it'll save you having to work out where to watch something.

24hrs with the new Apple TV

- Good
- Meh
- Evil



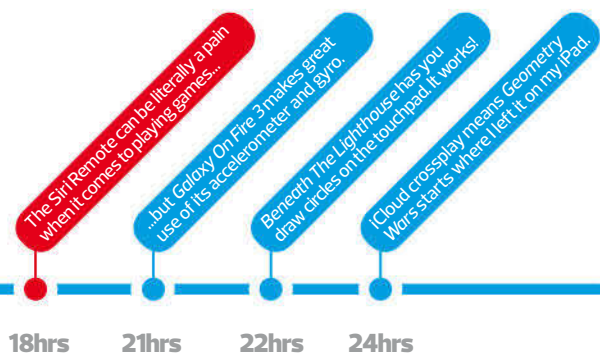


4 OS you can

Apple's brand new tvOS unfurls its charms to you with a blissfully sparse homescreen. It's similar to the old setup, except there's no longer preferential treatment for some third-party services. You'll also notice two newcomers in the defaults: Search and App Store.

5 Hot and cold apps

Delving into apps, most seem to be improved. Third-party apps enable a playfulness that the old Apple TV lacked — Carrot Weather's oddball forecasts from a malevolent AI beat the dull menus of the older model's Weather Channel app.



Tech specs

Storage 32/64GB **Processor** Apple A8
OS tvOS **Connections** HDMI 1.4, Ethernet, USB-C
Remote features Bluetooth 4.0, IR, accelerometer, gyroscope; rechargeable battery, Lightning connector
Dimensions 98x98x35mm
Weight 425g

Gaming on the Apple TV

With the introduction of the new tvOS, Apple TV has become a games machine. But is it any good?



■ Hard pressed

With its cramp-inducing form, the Siri Remote was clearly designed for quick and occasional interaction rather than gaming. Both the trackpad and the Play/Pause button require heavy presses for actions.



■ Thumb like it hot

For one-thumb gaming, this is OK. I racked up one of my highest *Canabalt* scores in my first go. The new *Rayman* game, which has more complex controls, works fine but feels odd on a tiny touchpad.



■ Playing the angles

Twin-stick shooter *Geometry Wars 3* works well as a single-stick avoid-'em-up... but dedicated gamers should consider a £40 SteelSeries Nimbus controller for more satisfying gameplay.



■ Stuck in traffic

Another limitation is even more problematic, as the maximum app bundle size of 200MB can really slow things down. *Racer Asphalt 8*, for example, needs to grab track data before you can race.



The Apple TV is hard to recommend over its rivals because it's more expensive and less open. But we've seen this story play out before — if it gets even a fraction of the support of its iOS cousins, it'll soon be drowning in great apps and games in a manner its rivals could only dream of. And that will make the decision a lot easier for most. @CraigGrannell

STUFF SAYS ★★★★★

Finally wrenched into the present, this Apple TV is a solid update that's brimming with potential



PC, PS4, Xbox One / justcause.com

Just Cause 3

Avalanche Studios' antihero Rico returns and sets out to liberate his homeland, by any hazardous means necessary...

I've just taken out three gas tanks with a missile launcher while hanging from a helicopter, on which I then placed an explosive... and detonated it as I parachuted away.

Just Cause 3 offers even more over-the-top power fantasy than its predecessors, but that's not a bad thing. It doesn't hide its intentions in narrative or a grim atmosphere. It makes no apologies for being silly. Enabling your destructive antics are a range of upgradable tools, vehicles and

weapons, including a wingsuit that lets you swoop through the air like an excessively armed flying squirrel.

It's a game about blowing things up, and doing it in style. Yes, I could just take a tank and clear the settlement quickly. But I could also ride in on a tractor and take some real pride in my work.

The generic Mediterranean nation of Medici is your playground, and it's a big one: three regions made up of islands with military bases, towns and outposts just waiting to be destroyed. Missions

pop up while you're roaming about, such as killing an informant and making it look like an accident (dropping a car on them from a helicopter counts as an accident, right?). But the best bits of *Just Cause 3* come when you're left to your own devices.

All this chaos would have been better if I didn't have to deal with frame issues. Playing on a well-specced PC, I had to choose between low graphics and a solid 60fps, or medium graphics and 30fps – nothing that made the

game unplayable, but frustrating when you're trying to admire your deadly handiwork.

Just Cause 3 does exactly what it sets out to do, and does it with an explosive sense of humour and a good grasp of the finer points of arsing about. It gives you the tools you need to have a great laugh; what's lacking are missions that drive the destruction forward in a meaningful way. Unless you're a massive fan of the series, it's not going to set your world alight.

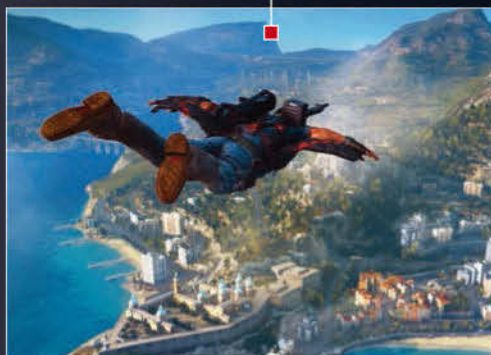
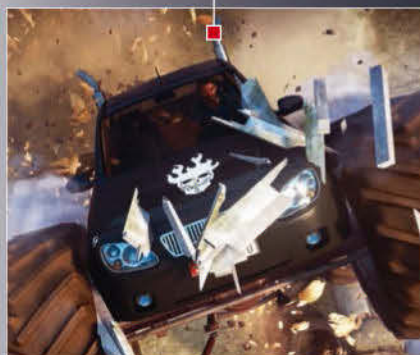
Holly Nielsen

STUFF SAYS Not the most intelligent game, but its explosive action is great for a laugh ★★☆☆☆



This may not be the most graphically accomplished game, but it's still pretty.

As well as the old grapple and parachute, there's now a wingsuit.

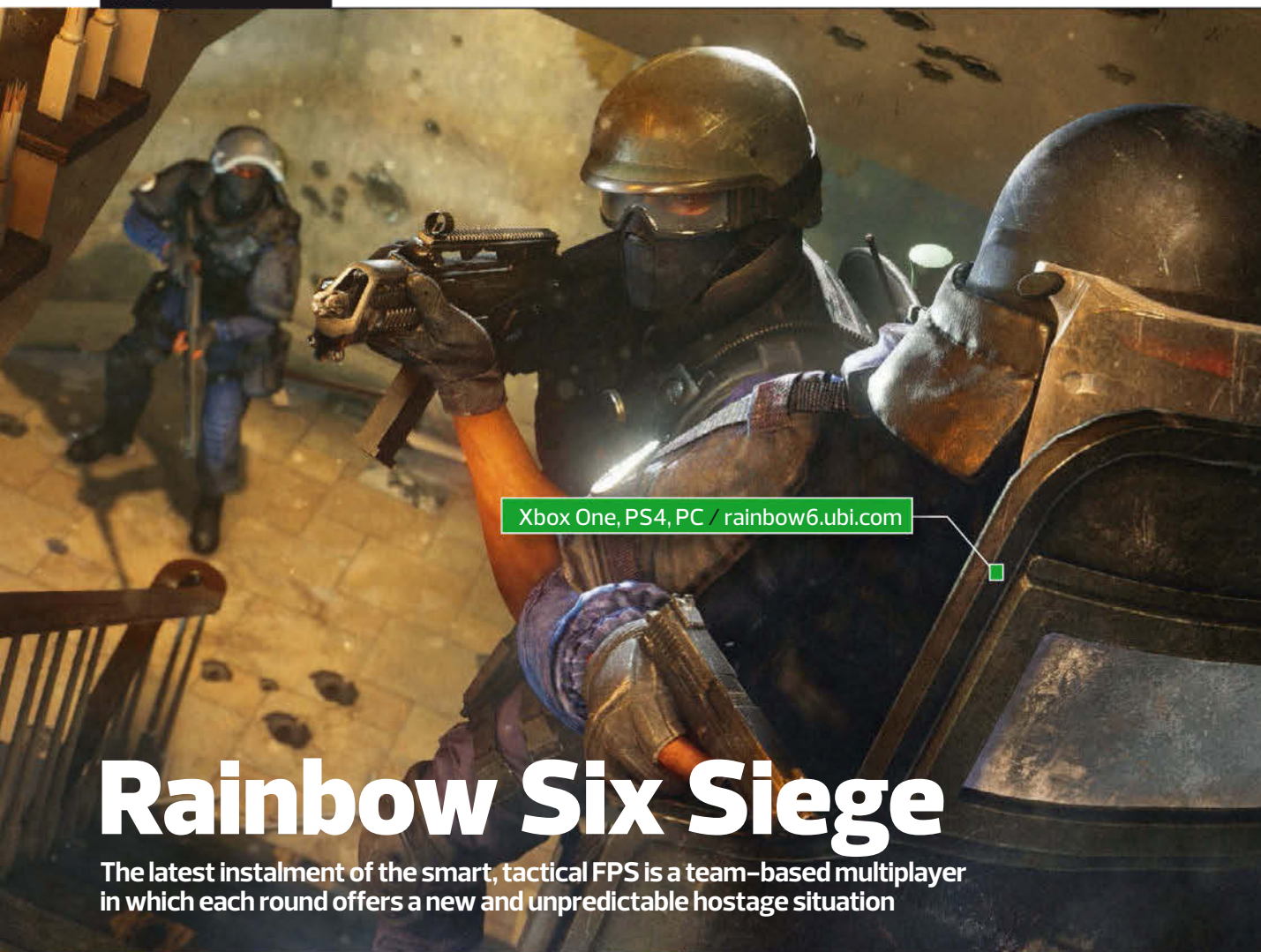


Choose your own agent of destruction

Just Cause 3 doesn't just let you destroy things; it gleefully enables you to create chaos. It's also great to have a protagonist who enjoys it just as much as you do. Rico's about as deep and complex as a spoon, but he's the perfect conduit for your ruinous fun. He makes amazingly cheesy quips, such as purring "Lights out!" when you ruin a power generator, or chuckling when you attach explosives.

Even 'liberating' a town does include destroying a lot of its major infrastructure and perhaps a few civilians, but it's all in the name of freedom. *Viva la revolucion!* Twitter and YouTube will soon be full of clips of people catapulting goats, attaching cars to planes and blowing themselves up in all manner of silly ways.

Some of the most enjoyable moments I had were playing with friends as we plotted the most extravagant ways to tear up Medici. At one point I excitedly called people to gather round as I had found my new favourite agent of destruction: a cow. Stick one of these grass-munchers in a makeshift catapult and you'll quickly milk pandemonium from your surroundings. *Just Cause 3* is not a game for the unimaginative, or vegetarians.

Xbox One, PS4, PC / rainbow6.ubi.com

Rainbow Six Siege

The latest instalment of the smart, tactical FPS is a team-based multiplayer in which each round offers a new and unpredictable hostage situation

The *Rainbow Six* series has always been about planning and tactics, and the tenth game in the series allows none of the wall-running and gunning you can do in *Destiny*. In *R6S*, any Leeroy Jenkins behaviour will get you mown down. This is a game about patient inching into position before a few moments of explosive brutality.

It's also about making sure your teammates are preparing, too: like *Counter-Strike*, this cops-v-terrorists team multiplayer game (there's no single-player campaign) is played in rounds, and you win by saving the hostage, defusing the bomb or wiping out the enemy. With 11 maps the variation comes from the way your team and your opponents behave, although every location (from a snowy safe house to a parked 747) is full of choke points, trapdoors and barricades.

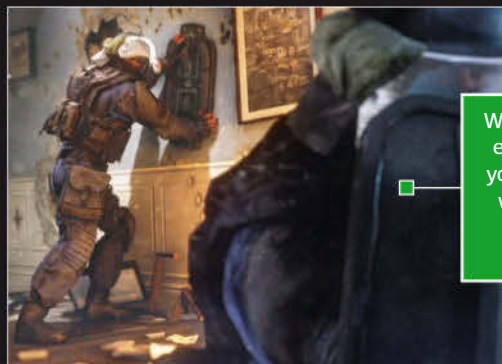
Most matches end up playing out the same way. The cops get into position while the terrorists hastily concoct their defences, and then everyone gets down to

redecorating the surroundings in various shades of fire and blood. Accomplishing anything useful earns you 'Renown', which you can use to unlock more groups of characters and upgrade their gear. Personal favourites include Mute, who come with signal jammers, and Fuze, who can send bombs through walls.

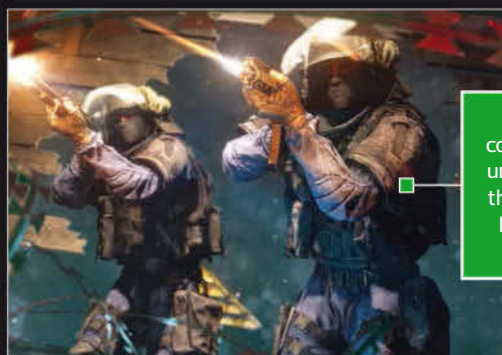
The alternative online mode is recurring fan fave Terrorist Hunt. This is essentially the same game but with more AI, giving things more of a co-operative feel.

Online play is smooth and solid (apart from a slight stutter when turning at speed), and when you launch a coordinated pincer attack or make a heroic last stand, *R6S* is a visceral, clever and hugely satisfying game. It adds some interesting new points, while at the same time stripping back the unnecessary extras that can make its competitors feel bloated. There's no fat, no single-player campaign, and no mercy. With more maps and weapons, this could be a short game that lasts a very long time.

Danny Wadeson



Wall-mountable explosives let you create new windows in a matter of seconds.



Operators come from five units, including the FBI (gung-ho) and SAS (sneaky).

STUFF SAYS Despite its repetition issues, *R6S* is still a truly unique shooter ★★★★★

BUNDLES OF JOY

Three MusicCast bundles from Yamaha. Three ways to make the most of your movies and music. And three ways to save money...

Many wireless multiroom systems are closed shops. You buy the speakers, and the rest of your kit becomes redundant.

Yamaha's MusicCast range lets you bring *all* your hi-fi stuff to the party. Anything you plug into it can be beamed to any other MusicCast speaker – any CD player, any turntable, anything with an output. Every MusicCast component is a Bluetooth transmitter too, so you can wirelessly stream music to your existing Bluetooth devices.

The best part? All the products mix-and-match – so your system can grow as you want. And you can control it all from your phone with the free MusicCast Controller app for iOS and Android.

Want to get started? Yamaha has put together some great packages to kick-start your listening. They'll save you money over the individual products, too...

TRIO PACKAGE



YSP-1600, WX-030, ISX-80

DUO PACKAGE



WX-030, ISX-80

DUETT PACKAGE



SP-1600, WX-030

The YSP-1600 soundbar features Yamaha's Digital Sound Projector tech for 5.1-channel surround-sound without the speaker-clutter, while the compact WX-030 speaker brings quality audio – and instant listening – to any room.

The stylish ISX-80 Restio speaker can be wall-mounted for a touch of extra style.

If you're more about music than movies, the Duo package – with the WX-030 and Restio speakers – is the one to go for. They're both compatible with Spotify Connect, Bluetooth and Apple AirPlay, and both can handle high-res material up to 24-bit/192kHz... so fire up your digital music collection and get listening.

Want to watch a movie in more than one room? You can send audio from anything connected to the soundbar – including TVs, set-top boxes, consoles and more – to the other speaker in another room. And, of course, you can use them separately with Spotify, Bluetooth, network audio and more.



Media hoard

This month we're gripped by DiCaprio wrestling a bear, lulled into a bit of a doze by some Spanish indie, and confused by an angel and a vet

WATCH

The Revenant_cinema

For a film so beautiful, *The Revenant* is horribly brutal. While the low sun shines through skinny trees, its rays hitting otherworldly details of the frozen landscape, a live burial, scalping or bear fight is never far away.

After an opening ambush to rival *Saving Private Ryan*'s beach landing, explorer and fur-trapper Hugh Glass (Leonardo DiCaprio) tussles with a grizzly the size of a Transit van – remarkable for both its savagery and its CGI.

Director Alejandro Gonzalez Inarritu must hate DiCaprio: having survived his run-in with Yogi's ill-tempered cousin, he spends the rest of the film fending off everything the wilderness has to throw at him. Alone in this dog-eat-dog, bear-eat-man,

man-eat-whatever-he-can-lay-his-hands-on world, Glass's steely desire to hunt down the mercenary who left him for dead (played with a barely intelligible accent by Tom Hardy) forces a startlingly physical performance out of DiCaprio, but it's the craft of filmmaking that's the biggest star here.

The camera floats through the middle of the film's most blood-pumping sequences as arrows whistle past your ears and into the throat of a nearby compatriot. While it teeters on the absurd, and America's relationship with its indigenous people isn't scrutinised as closely as it could have been, *The Revenant* sets the bar for 2016.

Tom Wiggins

STUFF SAYS ★★★★★



Everest_Blu-ray

Like a mountain-based *Gravity*, this is a disaster movie for big screens and thundering sound systems. Not that it's frivolous – it's a sober, realistic account of the 1996 Everest disaster with some moving performances, notably from Emily Watson. But eclipsing them all is the incredible cinematography, and the mountain itself.

Mark Wilson

STUFF SAYS ★★★★★☆



No Escape_Blu-ray

Riots, fighting and murder take hold of an unspecified Asian city; but while local bodies hit the floor, it's only the white middle-class family that *No Escape* is interested in. The action is gripping throughout and there are some brilliantly directed scenes of terror, but that setup (plus an occasionally awful script and CGI) leave a sour taste.

Tom Parsons

STUFF SAYS ★★★☆☆

LISTEN



Leave Me Alone

_Hinds

Hinds are a band from Madrid, formerly known as Deers, who borrow liberally from the lo-fi sound of California. Their brand of lackadaisical indie is sun-tinged and drawling, recalling wasted days and hazy infatuations. If you've ever listened to anything by Pavement, Beck or Girls, you'll know where they're coming from.

While *Leave Me Alone* doesn't offer up much in the way of surprises, it's

a pleasant enough listen in its own right. From the ramshackle lilt of *Chili Town* to *Easy*'s lush swells of reverb-laden guitar, you can't help but be charmed by the quartet's boundless reserves of feckless charisma. They're fun for a 30-minute daydream – just don't expect this debut album to stick with you to the year's end.

Rob Leedham

STUFF SAYS ★★☆☆☆



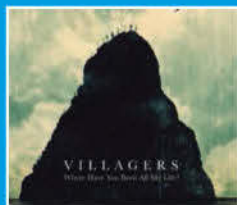
Not To Disappear

_Daughter

The follow-up stays close to the ethereal wooze-pop of Daughter's 2013 debut. The post-rock-inspired guitars and Elena Tonra's breathy vocals form a beguiling combo that's sure to soundtrack plenty of break-ups. If Beach House have become a little too Beach House for your tastes, this is worth a spin.

Tom Wiggins

STUFF SAYS ★★☆☆☆



Where Have You Been All My Life?

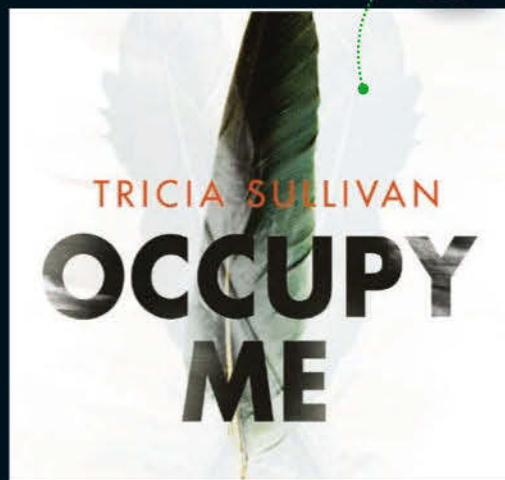
_Villagers

A bit of a curio, *WHYBAML?* (Best. Acronym. Ever.) is made up of tracks from Villagers' first three albums re-recorded in one or two takes in a semi-live studio setting. While that may all sound a bit dull and muso-y, it seems to have worked, giving the songs a welcome edge: less BBC Radio 2, more BBC 6Music.

Marc McLaren

STUFF SAYS ★★★★★

READ



Occupy Me

_Tricia Sullivan

Sci-fi specialist Sullivan tells the story of Pearl, a muscular angel whose unruly wings threaten her flight-attendant disguise. Apart from working for the Resistance, an organisation of covert kind acts, Pearl has no idea who she is.

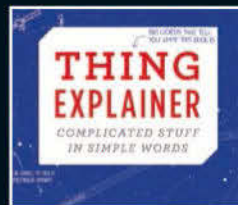
And she isn't the only one – at times you don't have the foggiest idea what's going on, who to trust or where the manhunt plot will go next. You can only admire the alarmingly

accommodating vet sidekick, puzzle over pronouncing dinosaur names, and go along with the idea that a suitcase is an entrance to another dimension.

But somehow, amongst all the animalistic chaos of tangled scrapheaps and prehistoric jungles, there are lines that beautifully sum up the human condition.

Emily May

STUFF SAYS ★★★★★



Thing Explainer

_Randall Munroe

Using only the 1000 most common English words, Randall Munroe (of XKCD fame) attempts to explain how complicated stuff works – and nails it. It won't make you an expert, and the lexical limitations can make it sound like it was written by a child, but for grasping concepts you've forgotten since school, it's a lot wittier than Wikipedia.

Tom Wiggins

STUFF SAYS ★★★★★



Philip K Dick: The Last Interview And Other Conversations

_ed. David Streitfeld

This is a full and very frank analysis of the great sci-fi author's battles with mental illness, his views on spirituality, and the process of his writing. It's interesting, but only avid fans of Dick (oh, stop sniggering) will get it.

Tom Wiggins

STUFF SAYS ★★☆☆☆

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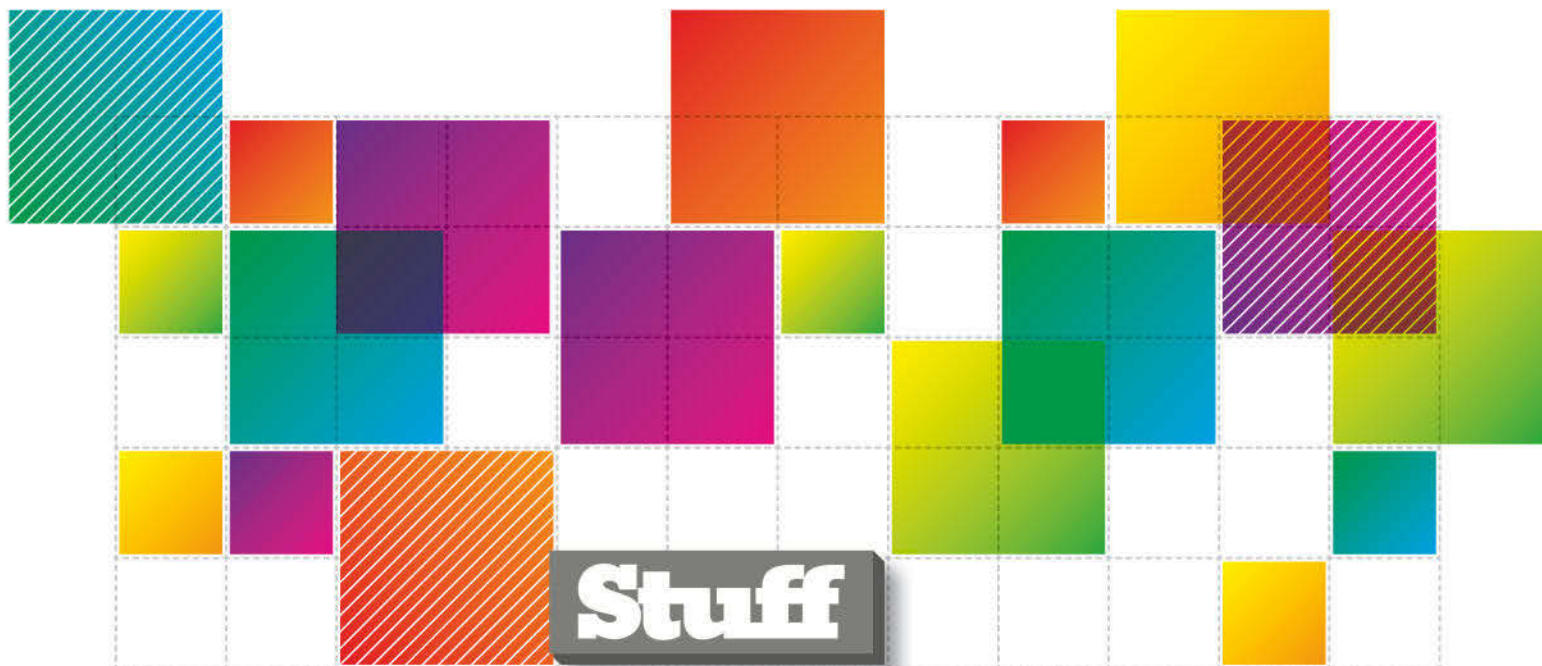
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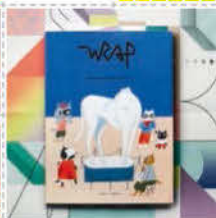
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BETA YOURSELF:
MONEY

It must be funny, in a rich man's world... and here's how to get there



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ONLINE
ART STORES

Cover that patch of damp damage with a classy print



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SUPER GEEK:
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From the best mag in the world, some other ones



p109
5-MINUTE
HACKS

How to bring the treasures of the Earth to every new browser tab

BETA
YOUR-
SELF

MONEY

Has your wallet got a thunderous New Year hangover? Financial expert Tara Evans shares cures for evaporating cash and stock market tips for budding investors

THE BASICS

■ Save a grand in a day.

Companies make a tidy profit from your procrastination and inertia. Put a day aside to shop around for better household and personal bills. For a four-step 'Money Makeover' plan go to bit.ly/moneymakeovertips

■ Get a free check-up.

Your credit score can affect the offers you get on everything from mortgages to smartphone contracts. Get a free check from the big three agencies (Experian, Equifax and Callcredit) by signing up for a free trial then cancelling within 30 days.



■ Boost your score.

To improve your credit score, make sure you're on the electoral register, set up direct debits to ensure you never miss a payment and cancel any unused cards. There is no single score, so lenders might rate you differently.

■ Find your perfect match.

Get bank account comparisons by downloading the Midata file

from your online banking service. Find the 'search with Midata' button on gocompare.com, upload your file, and you'll get personalised recommendations.

■ Divide and conquer.

Apple Pay might not offer P2P payments yet, but Pingit (Efree / iOS, Android) is an easy way to split bills in the meantime. It lets you send payments to anyone using their mobile number.

■ Start a mini Kickstarter.

Need to collect money for your birthday bash or restaurant bill? Tilt (Efree / iOS, Android) lets you create a campaign for friends to chip into. It'll even do the awkward nagging for you.



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SAVINGS SIDEKICKS

■ Take the long view.

You Need A Budget (Efree / iOS, Android) lets you manage your money in one handy place.

■ Learn to save.

Nationwide's app (Efree / iOS, Android) has a handy 'Impulse Saver' feature that lets you transfer pre-agreed amounts to savings without logging in.

■ Take a train to Savingsville.

If you travel by train in London and can't afford an annual Travelcard, CommuterClub (commuterclub.co.uk) could save you cash by offering better rates than TFL.



LEVEL UP WITH...



THE BOOK **MONEY MADE EASY 2015-16**

Written by Laura Whitcombe and Mark King, previously of mag *Moneywise*, this is a good financial reference point for pretty much every stage of your life. From how to get a pay rise, to buying and selling property, to organising your savings for big life events like marriage or children, it's the thing to reach for when financial hardship reaches 'card declined' levels.

£10.50 / amazon.co.uk



THE PODCAST **MONEY BOX**

Yep, it's been going almost as long as money itself, but this is still the best financial show. Every week there are exclusive investigations mashed up with an overview of the latest money news from journalist Paul Lewis and his team. Download or listen live while you make dollar sandwiches every Saturday from 12 noon.

£free / iTunes



SPEND ZONE

■ Get the big picture.

Use a budget planning service like OnTrees (ontrees.com) or YourWealth (yourwealth.co.uk) to link all your accounts in one place. They're good for seeing which splurges need reining in.

■ **Graph it up.** If you bank with Santander, take advantage of its Spendlytics app (£free / iOS), which serves up some lovely charts of your spending.

■ **Earn a warm glow.** Give to your chosen charity when you shop with giveasyoulive.com – it works like a cashback site, donating the retailer's kickback.



SOUND INVESTMENTS

■ Pick the right platform.

Nutmeg (nutmeg.com) and rplan (rplan.co.uk) make investing easy. There are two models: one with an admin charge, one taking a percentage of your holdings.

■ **Outsource the research.** Stockomendation (from £free / stockomendation.com) collates web tips, and lets you set up alerts for stocks and shares.

■ Level up your shares.

Sharepad (£250/year / sharescope.co.uk/sharepad) is aimed at those wanting to take control of an ISA or SIPP pension.



P2P LENDING

■ **What is it?** Sites like Funding Circle (fundingcircle.com), Zopa (zopa.com) and RateSetter (ratesetter.com) let people lend to and borrow from each other, offering a return of up to 7%.

■ It's not a golden ticket.

If one of the people you lend to defaults, your average return will fall. P2P lenders stress that their rate of bad debts is lower than the banks' because of strict lending criteria.

■ Don't forget the taxman.

Any interest you earn is subject to income tax in exactly the same way as normal savings.



THE BLOG **JORDON COX aka THE COUPON KID**

For the past three years, the Coupon Kid has dedicated his spare time to saving money and using coupons. Just 18, he's now blogging for Martin Lewis's MoneySavingExpert site. He says being called weird or crazy for his extreme money saving is just "water off a couponer's back". Which is good news, because we can all learn a little from Jordan and friends' frugality. moneysavingexpert.com/deals/deals-hunter



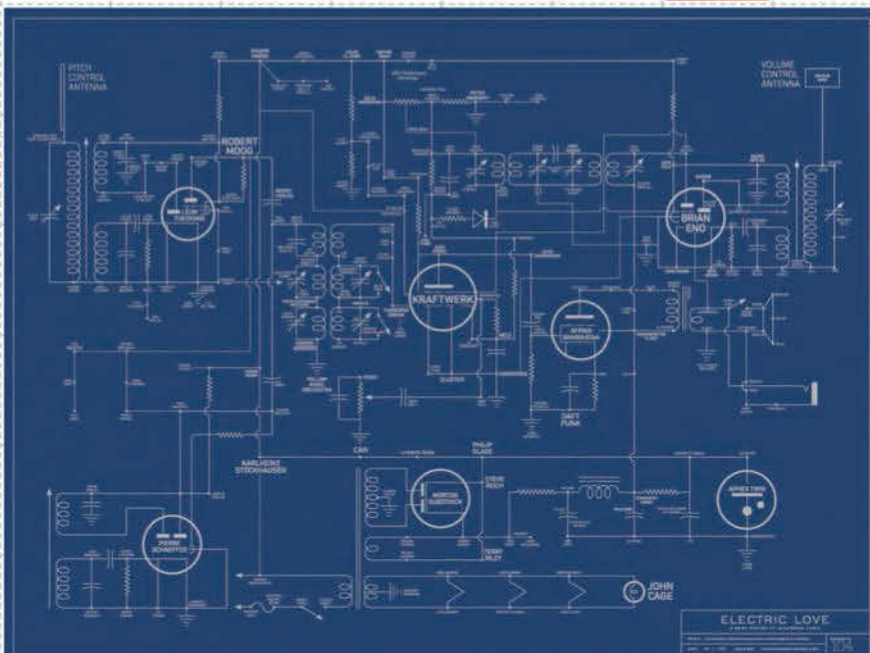
PLAYLIST

ONLINE ART STORES

You don't need Charles Saatchi's wallet to give your flat the bohemian touch — just snap up an affordable print from one of these virtual galleries

Dorothy

From renderings of long-gone football grounds to design-led drawings of the Hacienda, Dorothy sells some of the sharpest art on the web. Prices start at £35 for 40x50cm frameless prints, rising to £100 for limited editions. It's a step up from a Blu-tacked *Pulp Fiction* poster. wearedorothy.com



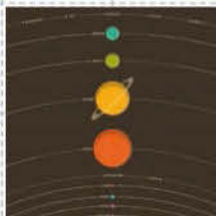
Caught By The River

This nature and travel site has long featured Stanley Donwood, whose woodcuts and prints found fame as cover artwork for his uni pals Radiohead. But it's his brooding prints of Dorset's holloways, made for a project with writer Robert Macfarlane, that really stand out. caughtbytheriver.greedbag.com



Atom Gallery

Based in London's Finsbury Park, Atom specialises in cheap contemporary art and screen prints. Its online store serves up work from its own recent exhibitions, starting at £40. Dig a little deeper and you'll find beauties like this limited edition Mark Perronet print of a Fender Concert guitar amp. atomgallery.co.uk



East End Prints

A big supporter of emerging artists, East End Prints is the perfect destination for picking up works from independent designers that are a step above your average post-Athena fare. Jazzberry Blue's simple *Solar System* print fits our inner astro-geek perfectly. You'll also find vintage, pre-*Stuff* mag covers. eastendprints.co.uk



Jealous Gallery

Shoreditch's Jealous Gallery has garnered a reputation as one of the capital's hottest studios. It sells a wide range of artwork, with prices ranging from £125 up into the high thousands. Jess Wilson's *Colour Wheel Experiment 1*, at £295, is a stunning, bright satin print that should satisfy design nerds everywhere. jealousgallery.com



Print Club

This East London studio has a vast collection of unique screenprints. We're particular fans of its posters inspired by films and books, like Joe Vass's *The Rum Diary No 2*, twisting classic images into something new and intriguing. If you fancy making your own, it also offers courses that start from £50. printclublondon.com



Artfinder

If you want a painting rather than a print above your fireplace, you might have to give Sotheby's a wide berth. Luckily, Artfinder serves up a huge selection of original paintings that don't require a Euromillions jackpot. Dan Kitchener's *Blade Runner*-esque moody canvases are our favourites. artfinder.com



HOW TO DISPLAY YOUR ART

by Anna Lysik,
interiors blogger
dontrampmystyle.co.uk



GET THE HEIGHT RIGHT

If there's no furniture in the way, hang around eye level. If you're hanging above a sofa or cabinet, leave at least a 20cm gap between your furniture and frame, and then 10 to 15cm between each frame.



PLAN YOUR LAYOUT

Gather all the prints, place them on the floor and create a layout before you start putting in hooks. Once you're happy, make a template with cardboard for each piece. Only then is it time to get hammering.



PICK THE RIGHT FRAME

For vintage prints, an ornate frame is best; if it's simple then straight black frames are ideal. There is a trend to use an old-school frame with modern art, but this only suits eclectic homes.



Rise Art

Everything that Rise sells is hand-picked by a panel of experts, from curators to critics. The result is an overwhelming art collection, all of which can either be bought outright or rented until you fancy a change. There are plenty of works to buy for under £100, with rentals from as low as £25.

riseart.com



Cook & Becker

Why not make your lounge a tribute to every game you've been debilitately addicted to? This store has become the go-to haunt for both classic and current prints; go for an illustration from *Streets Of Rage*, or something more arty such as this *Fellow Travellers* piece from *Journey*.

candb.com



Minalima

Set up by the prop designers behind the *Harry Potter* series, Minalima sells its own original prints in a variety of styles. The Woop Studios range has a stunning array of images, especially for those who can't get enough of a collective noun – think bold visualisations of *An Opera Of Canaries*. Prices start at £80.

store.minalima.com



King And McGaw

This Sussex store is the place to go for an affordable print of Cézanne. There's also everything from Mario Testino reprints to a fine Hammer film collection. But if you think Christopher Lee looming from your wall would be too terrifying, then go for this ace Quatermass Xperiment one.

kingandmcgaw.com

SUPER
GEEK

INDIE MAGAZINES

The internet is home to almost a billion websites, yet print is having a renaissance. How so? Stack Magazines founder Steve Watson explains why offline titles are surfing the sea of ones and zeroes

Magazines are brilliant. But I don't need to tell you that – you're holding a great one in your hands right now. For me, it all started with *Smash Hits*, then *Game Boy Magazine* and, for a while, *Arena*. But it was a movie mag called *Little White Lies* that changed my reading life forever.

A beautiful, intelligent magazine that seemed to have been made specifically for me, *LWLies* took my heart. And when I heard they were holding a meet-up in a pub, I nervously went along and offered my services as

a writer. For free. Just to see my name on their pages.

They gave me a go, and over the years I wrote all sorts of features, reviews and interviews; and through them I discovered a whole world of independent magazines – small, idiosyncratic titles run by passionate people who are absolutely dedicated to getting their words and pictures out into the world.

And the good news is that there are more independent publishers working now than ever before. Technology has massively democratised the

industry, and people all around the world are discovering that it's easier than ever to turn an exciting idea into a fantastic piece of print. Of course, there are also lots of mediocre mags out there too (and some that are just plain bad). But that just adds to the thrill when, searching the shelves and blogs, I come across another gem.

Because that's exactly what a beautiful, skilfully made magazine can do. Whereas television tends to be a passive experience and the web a fantastic but overwhelming

place, print provides a quiet, calming and absorbing way to convey words and images. When you're reading a magazine you're not doing anything else – you're in a carefully constructed world, led from story to story on a curated journey that you take at your own pace.

There was a lot of talk a few years ago about print being dead, but I think we've moved beyond all that now. More people are rediscovering print as a form of media that sits alongside their phones, laptops, e-readers and other devices. Come and join us!

JARGON BUSTER

GATEFOLD

Sometimes those pages just aren't big enough for all the good stuff, so a gatefold is used to add extra real estate. It folds out (and out, and out) to create a single long expanse of paper.

PERFECT BOUND

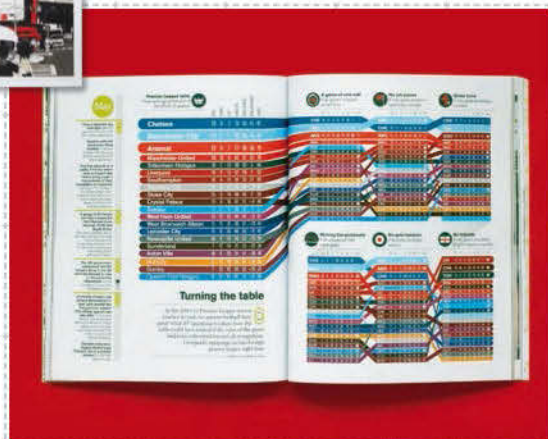
The way most mags are held together. The pages are glued at the spine and the cover attached, then the other three sides are trimmed to give 'perfect' edges.

FIFTH COLOUR

Most magazines are printed in CMYK, with all the colours made up from a blend of Cyan, Magenta, Yellow and black. But printers can add a fifth (or even sixth) special colour, and those who can afford them love throwing around those fluorescent inks.

GSM

The thickness of paper is measured in grams per square metre; if a publisher has invested in a fifth colour, they may roll it onto extra-thick, extra-tactile paper.



DELAYED GRATIFICATION

The magazine that's proud to be 'last to breaking news', *Delayed Gratification* makes a virtue of the slowness of print by returning to news stories after the dust has settled. Each issue looks back at the last three months' stories from all around the world, taking a more considered approach than would be possible for a weekly or even monthly title. With fantastic in-depth reporting, brilliant infographics (like the one pictured here on alternate reality Premier League tables) and a tone that manages to be both informative and funny, every issue is essential reading.

£36/year / slow-journalism.com

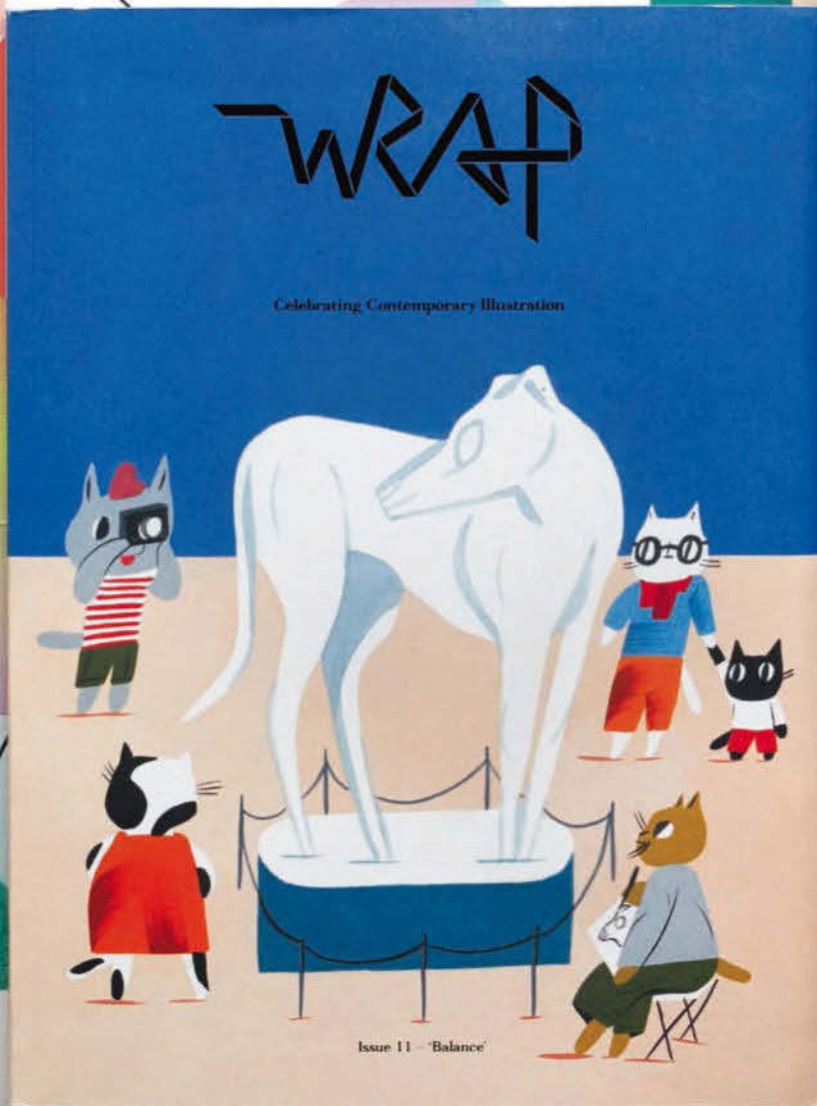
THE
SLOW
JOURNAL

FIERA

Great magazines are all about structure, and *Fiera* is built around a brilliant editorial framework. It's a biannual design magazine (one of a few that have raised funds from Kickstarter) that showcases the best work from the world's design fairs. It starts with a 'Kaleidoscope' section that shows snapshots of design objects arranged by colour. The rest of the magazine is then dedicated to exploring those objects in more detail – interviewing their makers, considering their context and investigating their production, all in a flow that keeps you flipping back and forth between the objects and all that extra information.

£36/year (+p&p) / fieramagazine.com

THE
DESIGNER
TITLE



Issue 11 - "Balance"

THE
SHAPE
SHIFTER

WRAP

The couple behind *Wrap* magazine started out looking for a way to show the very best illustrations in a large format. They hit upon the idea of creating illustrated wrapping paper, and *Wrap* was born. Each issue comes packed with gorgeous wrapping paper that comes apart in thick sheets, leaving a magazine that dives deep into the world of contemporary illustration. By interviewing illustrators, photographing them in their studios and rounding up the most interesting work being done today, *Wrap* displays great artwork and goes the extra mile to explain why it matters. **£12/year / wrapmagazine.com**

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STACK MAGAZINES

Founded in 2008, Stack sends a different independent magazine to its subscribers every month. You never know what you'll get next, but you do know it'll be a stunning, unique magazine you wouldn't otherwise have come across. And don't tell anyone, but you can save 10% off the usual prices by using the discount code **STUFF**. **stackmagazines.com**



THE MODERN MAGAZINE

Magazine art director Jeremy Leslie runs the *magCulture* website, and recently opened a shop with the same name in London. What Leslie doesn't know about independent mags isn't worth knowing... and he published it all in this book, interviewing magazine makers and exploring trends in independent publishing. **£22 / amazon.co.uk**



THE STACK

In no way related to Stack Magazines, this weekly half-hour radio programme is broadcast on *Monocle 24* and is dedicated to the world of print magazines. It's a brilliant way to hear from the people responsible for making some of the best, most exciting titles from across the globe. **monocle.com/radio/shows/the-stack**

G A D G E T

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MAIL OF THE MONTH

Q STORAGE WARS

Hi Stuff! I'm thinking of buying either the Apple MacBook Pro 13in with Retina display or the Asus Zenbook UX305. Both only come with a 256GB SSD. Is there a way of expanding the storage without it being obtrusive, and so I can still put music onto other devices through my laptop, or put photos into folders? I don't want to pay monthly for storage, though.

Jonah Palmer

A An NAS unit such as the WD My Cloud Mirror 6 (£230, amazon.co.uk) is the way to go. It has 4TB of space, which should be more than enough for all your photos, music and video, and the drive inside can be instantly swapped out. Once it's set up, you'll be able to access and reorganise your files anywhere in the world. If you get the MacBook, it's also got full Time Machine support, letting you back everything up at the touch of a button.

Speak your brains to *Stuff* and you could win a six-month **TIDAL HIFI SUBSCRIPTION**. This letter wins six months of high-fidelity music and video streaming from TIDAL, worth £20/month



Q STYLISH STYLUS

Hello. I want to ditch the array of notepads/scrapbooks used in my workplace and use a note-taking app and stylus on my iPad Air 2 instead. I don't need anything too snazzy, but I'd like a stylus that writes like a pen and an app that allows the flow of handwriting like a notepad, resisting palm feedback. I'm happy to spend up to £60; what would you recommend? Thanks!

Steve Matthews

A The fine-point Adonit Jot Touch Pixelpoint stylus (£60, amazon.co.uk) will quite literally tick all of your boxes. It's got 2048 levels of pressure sensitivity, which essentially means that the harder you press, the thicker your lines



will be. And yes, it supports palm rejection technology – meaning you can scribble away without suddenly realising you've got random lines or smudges rudely spearing your doodles or text.

Q GIF-TASTIC

Hi Gadget Doctor. This isn't the most serious question, but it's still important to me! I love gifs, but I'd like to take them to another level by making my own to send to friends or put on Reddit. I've got two silly cats that are ripe for the plucking, and the internet is awaiting their antics with open arms... except I have no idea how to make them. Do I need Photoshop? Anything that can easily convert smartphone videos (I have an iPhone) would be ideal. Thank you!

Sally Clifton

A We applaud your noble endeavour, Sally, and we'll gladly place you on the right path to Gif Town. While it's possible to make gifs using Photoshop, it's far, far easier to use an app like Giphy Cam (free, iOS). Not only

does it convert videos to gifs straight on your iPhone, but you can add filters, text and effects too. Your cats (and indeed the internet) won't have any idea what hit them.

Q UNFAIR GAME

Hi Stuff. I recently picked up a PS4 after my trusty PS3 finally (and thankfully) decided to bite the dust. I'm happily addicted to *Fallout 4*, but I'm having problems when it comes to all the online stuff. I'm frequently getting kicked out of party chats, or being disconnected from games, and I'm told that it's due to my NAT settings, whatever those are. I'm assuming this is something I can fix myself, but not sure where to start. Have you got any advice? Cheers.

Ian Stockwell

A Ah yes, the old NAT setting chestnut. Essentially, this happens when your router places certain connectivity restrictions on a console, which makes it less friendly with other consoles when playing with other users online. But it's also



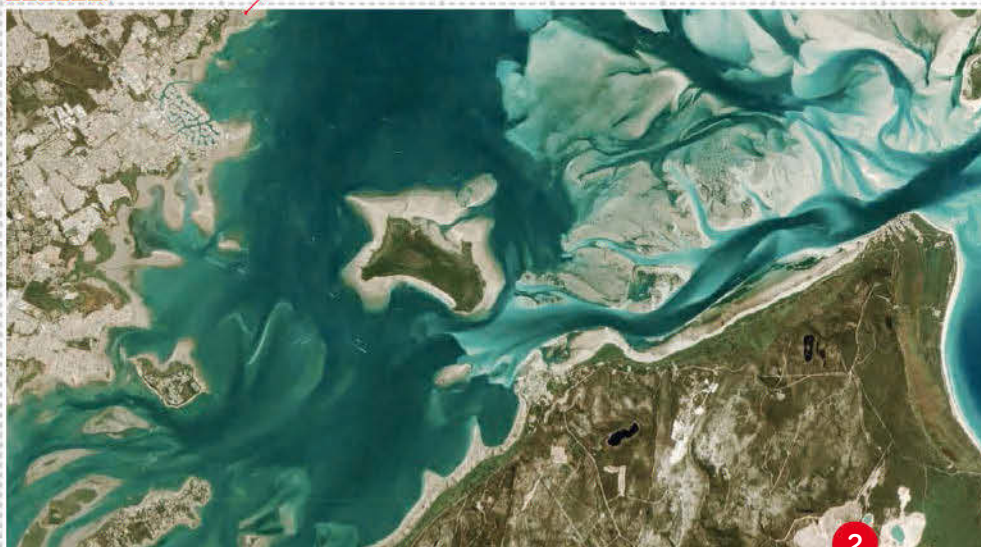
fairly easy to sort out. You're going to want to assign your PS4 with a static IP address in its network settings, then configure your router to place that IP address in a De-Militarised Zone (DMZ). Google those two things (specifying your router) and the instructions should be straightforward. Once that's done, your PS4 will have unrestricted access and will play nice with everyone.



5-MINUTE HACKS

IF NOTHING ELSE, AT LEAST...

1



1 FEAST ON SATELLITE SNAPS

With tickets to the International Space Station still a way off, you have two options for a daily fix of satellite imagery — build a rocket cam, or use these handy tools:

On your browser... Our favourite new Chrome extension, Urthecast Imagery (Efree, chrome.google.com), delivers a stunning new hit of landscape porn from its ISS camera every time you open a new tab. Prepare to spend large parts of your day staring vacantly.

On your desktop... Download Beautiful Earth (Efree, Mac App Store) and you'll get a different satellite snap as your background every hour or day. Click on its toolbar icon and it'll show you the photo's location on a map.

On your tablet... If you prefer your planet snaps overlaid with cloud patterns and weather dynamics, Living Earth (£2.29, iOS) will sate your meteorological needs. The Apple Watch version lets you see real-time Earth on your wrist, while shouting "What a time to be alive!"

2 CROWDSOURCE YOUR BOOK LIST

You've got Spotify Weekly for auto-generated mixtapes, but what about discovering your next big sci-fi read? These sites will give you a quick, informed nudge in the right direction:

Using Twitter... The speed of Twitter means you can miss out on reading tips that are popular in your feed, so ParrotRead (Efree, parrotread.com) collates them into a handy weekly email.

By location... If you're going on hols, whereshouldreadnext.com will suggest books that are set in the city you're visiting. Its sister site whatshouldreadnext.com is also good for a speedy, one-click recommendation based on your recent faves.

By obscure sub-genre... If you've decided that your next book simply has to be about sentient dragons taking over Victorian England, post a request in the 'Suggest Me A Book' subreddit (reddit.com/r/suggestmeabook).

3 AVOID SPOILERS

They're the web equivalent of black ice. Here's how to stay safe:

On Facebook... The Chrome extension Social Fixer (Efree, chrome.google.com) has a powerful filter tool that lets you hide stories by keyword, author or app. It also lets you completely overhaul Facebook's look and functionality, to the extent that it becomes almost bearable.

On Twitter... TweetDeck (Efree, tweetdeck.twitter.com) has filtering powers that let you silence particular phrases or users: just go to 'Settings' then 'Mute' to begin wielding your axe.

On Google Now... You can deliver football scores straight to your Android Wear watch, but you can also avoid updates for teams whose highlights you want to catch later. On the free Google Now app, go to 'Customise', 'Sports' then 'Hide spoilers'.

3



TUNE IN NEXT MONTH TO...

● Improve your guitar-thrashing skills ● Catch up on the best antihero flicks ● Geek out to the very finest headphone amps

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OF EVERYTHING

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For full reviews of every product in the Top Tens, visit stuff.tv/reviews

HOT BUY 1		Samsung Galaxy S6 This is a new era for Samsung, with a smart upgrade that fixes not just things that were amiss in the Galaxy S5, but things that have plagued them for years. No plastic here: its front and back are super-tough Gorilla Glass 4, its sides aluminium. In terms of ergonomics and speaker quality, HTC still wins, but only just. And in the more important areas of camera performance, screen tech and raw power, the Galaxy S6 tramples its rivals. We just wish it had a microSD slot.	STUFF SAYS Samsung has proven its critics wrong – the Galaxy S6 is the new benchmark for flagship phones from £430 ★★★★★
2		Samsung Galaxy S6 Edge+ The Edge+ is a larger version of the curvy S6 Edge that wowed us earlier this year; its extra chunk of screen and camera are terrific, while it's also technologically superior to almost everything out there. For a money-no-object phone, it's an absolute corker.	from £520 ★★★★★ BEST FOR CUTTING-EDGE GADGETEERS
3		LG G4 The leather-clad LG G4 is a treat for those who want something that looks and feels a bit different. Its camera is incredibly powerful, giving you almost as much control as a DSLR, and the large screen is brilliant... but the battery life holds it back from the top.	£320 ★★★★★
4		Google Nexus 6P The 6P gets the Nexus series back on the rails. Camera? Design? Performance? Software? All get a serious thumbs-up. Standouts include the finger scanner and the front camera, which are among the very best available at any price.	from £450 ★★★★★
5		Apple iPhone 6s "Everything's changed" is pushing it, but within the 6s's familiar body lies a surprising amount of innovation. You'll really notice the A9 processor's added speed, the 12MP camera's scope and quality, and of course, the time-saving delight that is 3D Touch.	from £540 ★★★★★
6		OnePlus 2 The second OnePlus phone massively undercuts the big names with performance, software and battery life that far exceed some of the £500-odd competition. The only thing that might put you off is simply how much of a pain the OnePlus 2 is to get hold of.	from £240 ★★★★★
7		Vodafone Smart Prime 6 Want the biggest, sharpest display for under £100? This 5in 720p screen wouldn't look out of place in a phone twice the price. If you like gaming or want to watch videos on the move, this is a real bargain – as long as you don't mind being locked to Vodafone.	from £70 ★★★★★ BEST FOR SUPER VALUE
NEW 8		OnePlus X A super-value phone that sets a new standard among sub-£200 mobiles. Its design and performance are sound, with no sign of 'cheapness'. The only real issue is that the OnePlus 2 only costs £40 more – with a more versatile camera and realistic colours.	from £200 ★★★★★
NEW 9		Sony Xperia Z5 Compact This snatches the 'small phone, big specs' baton from the Z3 Compact with ease. It has an updated processor and apes the Z5's battery life. The fingerprint scanner is great, but a sluggish camera and only 720p screen mean it has plenty of cheaper competition.	£430 ★★★★★☆
NEW 10		BlackBerry Priv BlackBerry's first Android handset stands out from every other current smartphone thanks to its unique design and physical keyboard. It's a capable powerhouse, and the shortcut functionality alone should be enough to tempt avid multitaskers.	£560 ★★★★★☆

● Prices quoted are for handset only unless otherwise stated

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3. Scroll through
the products and pick your options, just like a normal online purchase.



4. Hit 'buy' to get
it now or the heart to save for later. Proceed to kitchen, make cup of tea.

HOT BUY 1		Apple iPad Air 2 The iPad Air didn't really need to be thinner, but that doesn't mean 6.1mm isn't mighty impressive. This combines with reassuring weight and impeccable build quality to make this the most desirable tab on the planet. While the display is the same Retina resolution as before, clever screen tech brings the pixels closer to the surface, and the whole experience is even faster than before thanks to the new A8X chip. Basically it's the best tablet in the world made even better.	STUFF SAYS Thinner, lighter and mightier: Apple's iron-fisted reign at the top of the tablet charts continues unabated from £400 ★★★★★
2		Apple iPad Mini 4 This is the mini tab we've been waiting for. It's 1.4mm thinner and 32g lighter, just the right size for a great portable entertainment hub, and subtle display tweaks will do justice to games and graphic novels alike. Plus it will easily last three days on a charge.	from £320 ★★★★★ BEST FOR FUN ON THE GO
NEW 3		Samsung Galaxy Tab 8.0 This is the best of the small-screen Android tablets, bringing you all the fab features of its bigger brother but in a smaller, even lighter form design. The 8in model is great for reading mags, playing games and watching films, while being easier to hold in one hand.	£320 ★★★★★
4		Sony Xperia Z4 Tablet Sony have added a keyboard to this already stunning tab, so now it's handy for work as well as play, just like a Windows hybrid. Superb battery life, plenty of power, a slim body and super-vivid screen make this the best Android alternative to an iPad Air 2.	£500 (with keyboard) ★★★★★
5		Samsung Galaxy Tab S2 9.7 Slimmer and faster, with a brilliant screen and serious stamina, the Galaxy Tab S2 sees Samsung back in the running for the Android throne. The Xperia Z4 just pips it with its bundled keyboard, but the S2's a versatile, big-screen tab first and foremost.	£380 ★★★★★
6		Apple iPad Mini 2 with Retina display Yes, it's not as good as the new Mini 4... but believe it or not, Apple's iPad Mini 2 is the best cheap-ish tablet on the market. At £240, it's frankly bargain-tastic. That's why the 'old' model stays in our Top 10 – it's still a mini tablet of real quality.	from £240 ★★★★★
7		Microsoft Surface Pro 3 At last, Microsoft has delivered on the promise of the tablet-cum-laptop hybrid. It proves there's space in the world for a design that's more productive than an iPad or Galaxy Note, but easier to hump around than a traditional laptop.	from £550 ★★★★★ BEST FOR WORKING ANYWHERE
NEW 8		Apple iPad Pro Apple's tablet colossus, the supercharged iPad Pro, is for serious creatives with deep pockets: the perfect digital coffee-table book that just about doubles as a laptop. To make best use of all that screen, remember to also buy a Smart Keyboard and Pencil.	from £680 ★★★★★☆ BEST FOR ARTISTIC TYPES
9		Google Nexus 9 The design isn't as pristine, but this is a real Android contender to rival the iPads. You get the new Android 6.0 Marshmallow software, bags of power and a super-sharp display. With 12 hours of video play and two front-facing speakers, it'll be a great film buddy.	£225 ★★★★★☆
10		Microsoft Surface 3 Microsoft finally nailed the hybrid formula with the Surface Pro 3, and now it's translated it to this: a smart, ultra-portable design with the benefits of full Windows 8.1. It's easily the best affordable Surface yet. Just make sure you buy the keyboard.	£420 ★★★★★☆

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HOT BUY 1		Sonos multiroom system Who needs to drill holes and replaster walls to get a multiroom music system? Not you. With the addition of the cracking little Play:1 (£165) Sonos has made it easier than ever to start spreading your tunes around. Then maybe hook up a Connect to your existing hi-fi and router, and add speakers to a Connect:Amp in another room, or a SUB for a bass boost. You'll run out of rooms before you run out of options. For a further upgrade, the Arcam rSeries SonLink DAC works a treat with the Connect.	STUFF SAYS Infinite music in every room without the need for custom installers? Sign us up now, please from £165 ★★★★★
2		Naim Mu-so How much for a wireless speaker?! Well yes, but what a wireless speaker it is. Naim has ploughed all of its high-end hi-fi experience into delivering a beautifully made, great-sounding device with AirPlay, Spotify Connect and aptX Bluetooth all on board.	£895 ★★★★★ BEST FOR ONE-BOX WI-FI HI-FI
3		KEF Muo The KEF Muo sounds as good as it looks, which is very nice indeed. It may be the size of a beer can, but it creates a room-filling sound, brilliantly balanced and packed with vim and vigour. The Muo has the audio solidity of the B&W T7, but with even greater detail.	£300 ★★★★★
4		Google Chromecast Audio The original Chromecast was a very bright idea: a device to stream TV directly from the internet. Chromecast Audio has arrived to do the same to your hi-fi. It's smart and highly affordable, and makes a huge variety of apps such as Spotify and Deezer more fun to use.	£30 ★★★★★
5		Bowers & Wilkins T7 The T7 is B&W's first attempt at a portable Bluetooth speaker, and its good looks and real hi-fi sound combine to make it a real winner. It's solid and easy to use, and has an attractive honeycomb structure that helps reduce cabinet vibrations.	£300 ★★★★★
6		Monitor Audio Airstream S200 It may look a bit like a floppy skyscraper, but the Monitor Audio's Bluetooth-plus-AirPlay speaker makes a lot of sense, mostly because it takes up very little shelf/desk/table space but makes loads of lovely noise. It's a bit of a steal at this price.	£200 ★★★★★ BEST FOR PICNIC PARTIES
7		Cambridge Audio Go There are loads of very cheap Bluetooth speakers out there, but we reckon it's worth spending that little bit more to get something that's really good – and that's the Go. It sounds awesome, it's really nicely built and its battery lasts a massive 18 hours.	£100 ★★★★★
8		Bluesound multiroom system Fancy a bit of Sonos-style multiroom but with better-than-CD-quality sound thrown in? You want Bluesound. There are all-in-one speakers, adapters for your existing hi-fi, and a Vault that rips and stores all your CDs. All can handle high-resolution audio.	from £270 ★★★★★
9		Cambridge Audio Minx Xi It might not look all that fancy, but the Minx Xi is like that micro system you had at uni, only it gobbles internet music rather than Rage Against The Machine CDs. Just add a pair of quality speakers (try Wharfedale Diamond 220s) and you've got a great hi-fi.	£500 ★★★★★
10		Q Acoustics BT3 These ultra-versatile Bluetooth speakers have an optical input for waking up the audio of your flatscreen TV. The styling is simple and so is the sound – brilliantly so, with perfect hi-fi balance and an impressive focus to the stereo image.	from £210 ★★★★★

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HOT BUY 1		AKG K451 They've actually been around a little while now, but what put the K451 on-ears back on to our radar was an official price drop from £130 to £80, and a real-world price of just £50 or less. For that money they're unbeatable – awesomely agile and punchy sound wrapped up in a subtly stylish and foldable design. Add both standard and three-button control cables for maximising compatibility and there's practically no excuse for not getting brilliant sound from your phone.	STUFF SAYS Fantastic sound and great portability at an almost unbeatable price: the perfect phone upgrade £40 ★★★★★
2		Bowers & Wilkins P5 Series 2 Even the most demanding audio buff would find it hard to fault these – B&W have delivered a pair of premium on-ears that look, feel and sound exquisite. You control playback and volume with your iPhone, while feeling like a VIP guest at an intimate gig.	£200 ★★★★★
3		Philips Fidelio M1 MkII Your commute deserves a quality soundtrack, and second-generation Fidelio M1 headphones give you precisely that. There's oodles of detail to the sound and they punch harder than the Hulk. Beats and their ilk can't touch them.	£125 ★★★★★
4		SoundMagic E10S This is actually the third version of SoundMagic's awesome, affordable in-ears – not that you'd tell by looking. They sound even better, though: a little smoother and more refined, with tight, weighty bass. Plus there's now a mic and button for smartphone use.	£40 ★★★★★
5		Sony MDR-EX650AP If you're prepared to pay a little extra for your in-ears, these Sonys are even better than the SoundMagics above. The sound is that bit bigger, a little more detailed and a little more grown-up, and if you don't like the brass finish there's a silver version.	£40 ★★★★★
6		Bose QuietComfort 25 The best kind of silence is the kind you then fill with sweet, sweet music, and that's what the QuietComfort 25s give you. The active noise-cancelling quells office hubbub, air-conditioning and aeroplane hum, and delivers cracking sound in its place.	£220 ★★★★★ BEST FOR SHUTTING OUT THE WORLD
7		Soul Electronics Flex These simple in-ears are brilliant for workouts, as they stay put thanks to the comfortable and unobtrusive ear-hooks. Sound quality is excellent, with crisp treble notes, clean vocals and even a decent amount of bass for the money.	£50 ★★★★★
8		Philips Fidelio M2BT Building on the award-winning M1BT, Philips has added NFC for its new Bluetooth headphones and swapped the dark blue design for an understated black finish. The smart built-in controls and rich sound performance remain.	£170 ★★★★★ BEST FOR GREAT SOUND WITH NO WIRES
9		AKG Y50 The bright colour options (they're available in yellow, teal and red, as well as black) and massive logo have a slight try-hard feel about them, but the Y50s make up for it by sounding loads better than the more 'street' on-ear headphones out there.	£50 ★★★★★
10		Sennheiser Momentum Classically styled, cushion-comfortable and smooth-sounding, the Momentums are the perfect over-ears for the dapper man about town. There's also an on-ear version, smaller and barely half the price, available in pink, blue, green, brown and, um, 'ivory'.	£160 ★★★★★

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msi

MSI recommends Windows.

THIN STEALTH TECHNOLOGY



GS60 Ghost



- SHIFT
- KILLER DOUBLE SHOT PRO
- STEELSERIES ENGINE
- MATRIX DISPLAY
- NVIDIA GTX GRAPHICS
- COOLER BOOST 2
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HOT BUY	1		Amazon Fire TV 4K Amazon's new Fire TV is faster and more powerful than last year's model but more importantly, it supports ultra-detailed 4K video: TV and movies in four times the resolution of Full HD. Of course, you'll need a 4K set to enjoy all those extra pixels, but if you're thinking of making the upgrade soon, this streamer is a tele-futurist's delight. With the added attractions of neat voice controls and great gaming functionality, it's the most complete streaming box you can buy.	STUFF SAYS Netflix, iPlayer, Amazon video and Android games in one 4K-capable box £80 ★★★★★	
	2		Sky+ HD With built-in Wi-Fi for easy streaming, a 2TB drive and more than 65 channels of HD, this is a set-top superstation. On the move, the Sky Go app is supremely slick. But the most important thing is this: Sky has more movies, TV and sport.	from £free + £20/month ★★★★★	
	3		Roku 2 Roku's new mid-range offering is the most compelling yet. It is essentially identical to the Roku 3, just without the smart remote. With a customisable feed, Netflix, Now TV, Google Play, YouTube and all the UK catch-up services, it's unbiased, slick and simple.	£60 ★★★★★	
	4		Sony BDV-N5200 A whole (home) cinema (minus a telly) in one box? That's the Sony BDV-N5200. A Netflix-toting Blu-ray player, an amplifier, five speakers and a subwoofer, all for a lot less than an iPhone 6. There's even a wireless adapter for the rear speakers.	£370 ★★★★★	
	5		Sonos Playbar A characteristically Sonos take on the soundbar, the Playbar hooks up to your TV via its single optical input and fills your room with a big, detailed sound. And as with all Sonos kit, it can stream your own music files, Spotify and more as part of a multiroom system..	£550 ★★★★★	BEST FOR STREAMING MUSIC
	6		Google Chromecast The new Chromecast lets you search multiple streaming services from one app, offers better Wi-Fi and lets you use your phone to control Android games. For the seriously impatient, its smart preloading also loads Netflix episodes almost instantaneously.	£30 ★★★★★	
NEW	7		Yamaha YSP-3300 Surround sound skills from a compact box of tricks – Yamaha's done it again. This premium soundbar properly fills a room with its digital sound projector technology; it also comes with a wireless slimline subwoofer and neat transmitter for streaming.	£695 ★★★★★	
NEW	8		Panasonic SC-BTT590 Brilliant all-round performance makes up for this Panasonic's slightly dreary design. Bursting with features, it has excellent picture quality and immersive surround sound. Its Viera Connect portal is vastly improved, with BBC apps and Netflix streaming.	£630 ★★★★★	
NEW	9		LG NB3520A This affordable soundbar with wireless sub has everything... well, almost everything. Its lack of HDMI inputs aside, this cracking home cinema bargain offers up dynamic, detailed and spacious sound, a solid build and Bluetooth connectivity.	£200 ★★★★★	BEST FOR BUDGET BOOMERY
NEW	10		Apple TV (2015) Cupertino still hasn't given us a real telly, but this powerful streaming device brims with potential. Its Siri Remote could be a game-changer and it works well as a platform for third-party apps and games; but for now it's more pricey and less open than its rivals.	from £130 ★★★★★☆	

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HOT BUY
1



LG 55EG960V

We knew that one day OLED and 4K would be joined in holy matrimony, and that the results would be rather special. That day is now upon us and 'special' doesn't quite do it justice. This 55in LG is the new pinnacle of TV tech and performance, combining the unbelievable colours, contrast and brightness of OLED with the super-sharp, ultra-detailed images of 4K to create a picture that's more real and enticing than looking out of the window.

STUFF SAYS

It's mighty pricey, but if you're after the finest flatscreen known to man, this is currently it

£2250 ★★★★★

2		LG 55EC930V Not everyone's got £4000 to blow on a flatscreen, and if you have to choose between OLED and 4K it's OLED we'd take right now. The awesome colours, super-deep blacks and amazing contrast will make everything you already watch look extra-amazing.	from £1350 ★★★★★	
3		Samsung UE48JU7000 This 48in display is a crowd-pleaser, with great performance, good looks, web-based smarts and plenty of connections. Picture quality is stunning – super-sharp and clear in 4K, and brilliantly upscaled in 1080p. There's also a slick multitasking interface.	£1000 ★★★★★	
4		Panasonic TX-50CX802B After losing ground to other makers last year, can Panasonic's new flagships win big? Sporting a new 'Super Bright' LED panel and attractive Firefox-powered interface with customisable pop-up menus, this telly is intuitive and offers strong 4K performance.	£1170 ★★★★★	
5		Sony KD-75X9405C This is 75 inches of holy cow: the sort of thrilling picture that lets you see exactly how much hair gel Paul Hollywood uses, although the default setting is so bright you'll squint like Clint Eastwood. And those proper speakers at the sides make a real difference.	£6000 ★★★★★	
6		Samsung UE55JS8500 Each of its 8.3million pixels is put to good use, filling the screen's handsome real estate with pin-sharp outlines, potent contrast and eye-popping colours. Sound-wise, it's way more powerful than bog-standard flatscreens. Worth the pretty penny? Oh yes.	£1520 ★★★★★	
7		Panasonic TX-40CS520 Giant TVs aren't for every living room. Thankfully, you can still get hold of 40in screens, and the TX-40CS520 is testament to just how good an affordable TV can be. There's no 4K or 3D, but with smart features, apps and built-in Wi-Fi, this is an absolute steal.	£355 ★★★★★	BEST FOR A SMALLER SCREEN
8		Samsung UE48J6300 The pronounced curve on this Samsung is the first thing you'll notice, as the picture may look a touch skewed from some angles; but if you're viewing from the centre it's totally immersive, and for a big TV on a budget, the picture quality is superb.	£450 ★★★★★☆	BEST FOR AFFORDABLE CURVINESS
9		John Lewis 55JL9100 Don't be confused – LG made a TV and John Lewis has slapped its logo all over it. This is an option for those who want a big 4K screen without paying big 4K prices. You will compromise on detailed video performance, but you'll still get LG's intuitive software.	£900 ★★★★★☆	
10		LG 65UF850V Want a huge TV that could still just about fit under the roof and won't require you to take out a second mortgage? This 65-incher fits the bill. It doesn't have tip-top specs but does have LG's superb WebOS 2.0 channel-to-app bouncing interface.	£1650 ★★★★★☆	

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HOT BUY 1	 Sony PlayStation 4 The best and most popular games machine on the planet. It has whisper-quiet operation, a sleek form and bags of power, with full 1080p on all titles and not a whiff of lag. And if 500GB of storage is too little for you, a 1TB model is now available. New features like Remote Play, PS Now and PS Plus also add real value and wow factor. With exclusive titles such as <i>Uncharted 4</i> and <i>No Man's Sky</i> still to come, the PS4 has plenty more to offer soon.	STUFF SAYS The PS4 was brilliant when it launched, and it's undeniably even better now from £260 ★★★★★
2	 Microsoft Xbox One This is very different to the Xbox One of 2013. Most significantly, the unpopular Kinect feature is now out of the deal, allowing Microsoft to drop the price and releasing enough extra power for developers to make their games look and play better.	£250 ★★★★★
3	 Alienware Alpha It's not quite a PS4 or Xbox One-beater, but this is the most console-like PC there's ever been. Steam is the main interface, but it runs on top of Windows for maximum game compatibility, and performance is very impressive.	from £430 ★★★★★☆
4	 Sony PS Vita Slim If you're serious about gaming on the go, the Vita is way better than a smartphone, and when you get home you can play your PS4 games in bed thanks to Remote Play. That's gaming decadence, right there.	£180 ★★★★★☆ BEST FOR GAMING ON THE MOVE
5	 Nintendo Wii U While it hasn't had the same impact as the original Wii, don't underestimate the U's fun factor. Nintendo's bottomless bag of superb game franchises rolls on with the excitement of <i>Mario Kart 8</i> , with its anti-gravity karts and submarine racing.	£180 ★★★★★☆

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HOT BUY 1		Apple iMac with Retina 5K display (2015) The 5K 27in iMac is the most desirable home computer in the world. It doesn't try any funny stuff or any 'revolutionary' gimmicks. However, fantastic hardware design, great software and a terrific screen make it a joy to use day to day. There are plenty of bits that could be improved, and despite the fancy screen this is ultimately a good old-fashioned home PC in a shiny box. But what's wrong with that, eh?	STUFF SAYS What was already our favourite PC has been further finessed with Apple magic from £1450 ★★★★★
2		Sapphire Edge VS8 This mini-PC may look like the Terminator's lunchbox, but it houses AMD's 1.6GHz A8 APU and dedicated HD7600G graphics with 4GB of RAM. A capable little fellow, the VS8 even does a decent job with the latest gaming titles (with the detail dialled back a little).	from £245 ★★★★★ BEST FOR COMPACT POWER
3		Alienware X51 (2014) The X51 hasn't changed a huge amount, but the wee size matched with powerful components make it perfectly suited to HD gaming. Steam Machines are going to liven this market up but right now it's the best balance of power and form in PC land.	from £660 ★★★★★
4		Raspberry Pi 2 Tastier than ever, the reworked Raspberry Pi 2 is more grown-up and still just as cheap. The key upgrade here is the processor, now with four cores and double the RAM, from 512MB to 1GB. The Pi 2's speed has vastly improved but it still needs a microSD to boot.	£30 ★★★★★☆
5		Zotac ZBOX Sphere OI520 About the size and shape of a cannonball or cantaloupe, this striking sphere will certainly draw attention. For media playback it's perfect, but high-end gaming is a no-go due to low frame rates. However, even in full swing it barely raises a decibel.	£425 ★★★★★☆

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HOT
BUY

1



Apple MacBook Pro 13in (2015)

Apple hasn't changed too many parts of the MacBook Pro for 2015. There's a fancy new trackpad and the latest generation of Intel CPUs, which deliver better stamina as well as a chunk more power. This is an incremental upgrade, but given how good the Pro already was, that's more than enough to keep it right at the top of the laptop honours list. If you need power as well as stamina and portability, this is one of the best laptops money can buy.

STUFF SAYS

If it ain't broke... it hasn't radically changed, but the Pro's performance and trackpad are top of its class

from £1000 ★★★★★

2



Asus ZenBook UX305

Asus knows what it's doing. It knows that the Apple MacBook Air laptops are treading water and the ZenBook UX305 is pretty much everything the 2015 Air should have been, with its fetching aluminium design and as good a display as any £1000 laptop.

from £500

★★★★★

3



Microsoft Surface Pro 3

The fact that it's the only device to feature in two of our Top Tens is a testament to the Surface Pro's versatility: it's a strong tablet, but its full-fat operating system and powerful innards mean it's also a worthy adversary to Ultrabooks and MacBooks.

from £660

(with Type Cover)

★★★★★

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4



Asus ROG G751

The G751 is for the loud and proud PC gamer. While its design is rather brash, the awesome performance, good screen and highly effective fans that keep it pretty quiet under pressure make this one of the best gaming laptops around.

£1080

★★★★★

5



Apple MacBook (2015)

This is no 'Air', nor 'Pro': a clear sign that this is what Apple sees as the future of the ultraportable laptop. And it's certainly very desirable: a 12in lean machine with a superb screen and haptic touchpad. The lack of ports can be frustrating, though.

from

£1050

★★★★★

6



Aorus X3 v3

This high-end gaming PC is packed into one of the smallest chassis we've ever seen, complete with a drool-worthy Ultra-HD screen, good sound quality and all the storage you'll ever need. It is pretty pricey, but it will keep you at the top of your game.

£1300

★★★★★

7



Toshiba Chromebook 2

Toshiba has created the most desirable Chromebook to date with some well-judged upgrades. Smaller, lighter and great value, the screen's resolution now has pin-sharp HD and the Skullcandy speakers are distortion-free. It lasted eight hours on test.

£200

★★★★★

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8



Apple MacBook Air 13in (2015)

Apple is scraping by with pretty much the same Air design as before. You get a new processor, new connectors and slightly improved battery life, but still no Retina screen. However, if a portable road warrior is what you're after, this is still a great choice.

from £850

★★★★☆

9



Dell XPS 13

This nippy ultrabook packs mucho screen into not much space, without compromising on usability. With a backlit keyboard, decent battery and full HD screen, only its lack of gaming power holds it back. It's also thinner and lighter than the average 13-incher.

£995

★★★★☆

10



Google Chromebook Pixel

The new Pixel comes within a hair's breadth of five stars. With its pin-sharp screen and class-leading design, it is a superb laptop. But it's a superb laptop that still only runs one browser. Still, you could always install Ubuntu on it...

from £800

★★★★☆

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WEARABLES

HOT BUY	1		Apple Watch Apple's Watch is by no means the first smartwatch, but it is the most desirable. It's more luxurious (and yes, more expensive) than its rivals, its software is better thought out, and in the coming months you'll see an explosion of new apps for it.	from £300 ★★★★★	BEST FOR TECH YOU WANT TO WEAR
	2		Jawbone UP3 With its latest band, Jawbone has delivered meaningful fitness data in a stylish package. The splashproof UP3 is unobtrusive, lasts over five days and does well not to overwhelm you with stats; instead it provides useful information at relevant times.	£110 ★★★★★	
	3		Garmin Fenix 3 This is a serious sports watch. It's especially geared for triathlon, with a dedicated race mode, but it's also a great training tool for each discipline and other sports besides. It doesn't do heart monitoring, but a 10-day battery life is your compensation.	£265 ★★★★★	
	4		Pebble Time Steel It's very similar to the Pebble Time, but the extra Gorilla Glass 3 on the front makes it a bit less damage-prone and the bonus battery life means it'll last for a solid week of proper use. These tweaks ensure that the Time Steel is the best Pebble you can buy.	from £230 ★★★★☆	BEST FOR BATTERY LIFE
	5		LG G Watch Urbane While the original G Watch R didn't exactly set our hearts aflutter, the handsome Urbane is currently the best Android Wear smartwatch we've tried. It boasts a slick, superior screen that'll last you nearly two whole days on a single charge.	£175 ★★★★☆	

SMARTHOME

HOT BUY	1		Nest Learning Thermostat Nest has a smart design paired with a ton of features to control your heating in style. We recommend making use of its IFTTT channel: it offers map-based geofencing, or you can fire up the boiler with a text. There's even voice control via Google Now.	£180 (with installation) ★★★★★	
	2		Synology DS214se Within this entry-level hardware beats the best NAS (network attached storage) software yet. Not gorgeous to look at, but at least it's small and easy to hide away. If you're new to the NAS party, the DS214se is the cheapest way to get onboard.	£115 ★★★★☆	BEST FOR BACKUP AND STREAMING
	3		Honeywell Evohome Set schedules to control the precise temperature of each individual room of your family home, using either the tablet-like central controller or the free Total Connect Comfort app. It's a big old investment, but you'll soon pity anyone living without it.	£225 + £70/radiator + installation ★★★★★	
	4		Netatmo Welcome Netatmo's smartcam now has added face recognition capability, which works reliably well once it knows a face, and all the usual motion and noise detection is controllable. We also like the way individual profiles can be adjusted. Slick and hugely informative.	£150 ★★★★★	
	5		Philips Hue (2015) While Hue once stood alone in its own colourful smartbulb world, recent updates mean it'll now play nice with Apple HomeKit, which brings Siri voice control. Not an Apple fan? There's also support for Samsung Smart Things, and Nest Weave is on the way.	from £60 ★★★★☆	

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SLRs

HOT BUY	1		Fujifilm X-T10 For rich landscapes, detailed macro shots, stunningly sharp portraits and everyday photos, the X-T10 beats most other choices at any price. It also handles beautifully and can be paired with some of the most consistently superb lenses you'll ever find.	£440 (body only) ★★★★★	
	2		Canon EOS 5DS A fantastic piece of kit that any pixel-peeping DSLR owner will get heaps of enjoyment out of. The astounding 50MP sensor puts an incredible amount of pictorial detail at your fingertips, and the 5DS is very much pitched as Canon's ultimate stills camera.	£2150 (body only) ★★★★★	
	3		Sony A6000 Sony's new system camera may be tiny but it packs a big photographic punch. There may be no optical image stabilisation but the incredible speed and accuracy of the A6000's autofocus is a real highlight, as is its large, clear electronic viewfinder.	£370 (body only) ★★★★★	BEST FOR ALL-ROUND VALUE
	4		Olympus OM-D E-M5 MkII A number of upgrades make this tempting even for existing E-M5 owners. It's just as attractive if you're looking for your first advanced camera, or jumping from a lower-specified model – it's solid but highly portable, and the images are gorgeous.	£630 (body only) ★★★★★	
	5		Canon EOS 750D The 750D redefines what an entry-level DSLR can be: it's remarkably easy to use, will help you take stunningly good photos whatever your experience level and won't ever let you down.	£390 (body only) ★★★★★	

COMPACT CAMERAS

HOT BUY NEW	1		Sony Cyber-shot HX60V The HX60V is a top-class all-rounder, the Ian Botham of snappers. Few cameras offer this level of versatility in such a lightweight package: a 30x optical zoom lens, 1080p video, manual controls and GPS for tagging... plus NFC and Wi-Fi for cable-free sharing.	£220 ★★★★★	BEST FOR TAKING ON HOLIDAY
	2		Sony DSC-RX100 IV The RX100 IV is a superb premium point-and-shoot that offers all the versatility, flexibility and dependable all-round performance you could need. And while you may hesitate at the price, no other current pocket-sized camera can best it.	£650 ★★★★★	BEST FOR POCKETABLE POWER
	3		Panasonic Lumix LX100 This is one the most capable premium compacts on the market – and the LX100's 4K capabilities give it a crucial edge over its rivals. HD video capture and superb stills performance make the Panasonic a star performer when it comes to the basics too.	£400 ★★★★★	
	4		Sony RX10 II Sporting a memory-attached sensor, this camera has the ability to record video at 1000fps or stills at 1/32,000 of a second – speeds usually reserved for pro kit. As an all-rounder with a non-interchangeable lens, there's no other model that can touch it.	£850 ★★★★★	
	5		Panasonic Lumix FZ1000 Bridge cameras often feel like a compromise, but the FZ1000 is incredibly versatile: a fixed-lens camera capable of shooting fantastic stills and video in almost any situation. And yes, it's nearly the same as the Leica V-Lux 114, but much cheaper.	£500 ★★★★★	

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SMARTERWATCHES

S

urely they can't get more clever?

But this is no ordinary smartwatch, you see. Well, technically it is, but it's been modified to do more than tell the time or alert you when you've got a fresh new life in *Candy Crush*. Thanks to Disney Research and Carnegie Mellon University's EM-Sense technology, this watch is capable of detecting what object your hand is touching. That's right, all those stupid, unconnected things you touch every day (door handles, saucepans, toothbrushes) have been instantly smarterised. Without the need to stick an RFID chip on them.

What is this new devilry?

Science. Most everyday objects emit tiny amounts of electromagnetic noise, and when we touch them, this signal travels through our bodies. It's too faint for us to detect, of course, but by using a modified radio that can detect these signals – along with software to read their patterns – this smartwatch can recognise the signature electromagnetic noise emitted by the object you're touching and use that info for new awesomeness. It could be the feature smartwatches need to go from nerd-cessory to essential life companion.

But... why? I can tell the difference between a toothbrush and a saucepan already.

We'd like to think you can, yes. But imagine turn-by-turn navigation popping up on your watch when you grip a steering wheel, or your lights turning off when you touch the handle of your front door. Get the picture? It has the potential to bring smart automation to a whole new level. Don't expect to see it in the Apple Watch 2, though – there's still shrinking to do to make it fit into today's watches. But once that happens, it should only need a library of electromagnetic signatures and some companion apps.

[Words Esat Dedezade]

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